

**CLINIC NOTES**  
**22<sup>nd</sup> ANNUAL MEETING**  
**NCTCA ★ ★ ★ ★**

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June 1951 - University of Washington

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Combined with  
Clinic Notes  
Fourth Annual  
Winter Meeting  
Dallas, Texas  
January 1951



**NATIONAL  
COLLEGIATE  
TRACK COACHES  
ASSOCIATION ★**

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## NATIONAL COLLEGIATE TRACK COACHES ASSOCIATION



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Vice-President



Frank Hill  
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M. E. "Bill" Easton  
Secretary Treasurer

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# THE NATIONAL COLLEGIATE TRACK COACHES ASSOCIATION

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\*Pictures of Stanfield courtesy SCHOLASTIC COACH.



# Minute of the Winter Meeting

## National Collegiate Track Coaches Association

### HOTEL ADOLPHUS, DALLAS, TEXAS

**Thursday, January 11, 1951**

**2:00 p.m.**

Prior to Chick Werner's (Penn State) talk on Standardization Committee he suggested we (NCTCA) go on record as favoring eligibility of Freshmen in our spring program. The following resolution was drawn up and Mr. Werner selected by President Frank Hill to present same to Executive Committee.

Resolution:

"The National Collegiate Track Coaches of America go on record as favoring recommendations to the various conferences through the channel of the N.C.A.A. Executive Committee favoring the eligibility of freshmen in our athletics as of this date, January 11, 1951."

Proposed by Werner

Seconded by J. Morriss (Arkansas)

Opposition talks led by Frank Anderson (Texas A.M.) and Brutus Hamilton (California)

Vote — For — 15

Against — 4

Passed

**Business Meeting, January 11, 1951**

**Thursday, 2:30 P.m.**

Secretary asks for information concerning All-American Track Team. Suggested he be at meeting of Rules Committee immediately following National Track Championships when team is selected. This information to be released to press and radio no sooner than 10 days after meeting. The All-American certificates to be signed by President and Secretary of N.C.T.C.A.

President Hill suggests we have nominating committee fill advisory committee vacancies and enlarge committee to eight, selecting one man to represent each N.C.T.C.A. district. Present at June meeting.

Consent.

Brutus Hamilton ask about old constitution. President Hill instructed Secretary to look up old constitution and by laws. If these cannot be found,

draw up a new set. These to be presented to group at June meeting.

Flint Hanner suggested a dinner for N.C.T.C.A. at winter meeting. President Hill says George Rider (Miami U., Ohio) could act as chairman at next meeting (1952) that will be held in Cincinnati, Ohio.

Moved by Flint Hanner; seconded by Ralph Higgs (Oklahoma A.M.) that we express our thanks to United Film Company for use of their Olympic film.

Consent.

Larry Snyder suggested we contact French Olympic coach to determine availability and opportunity to buy his 16mm films on track. President instructed Snyder to do so.

**Friday, January 12, 1951**

At close of afternoon meeting President Hill brought up question of holding only a June meeting due to coaches being away from their teams, inability to attend of so many coaches, the hard work put in by men making the talks and so few in attendance to hear them, track meetings over shadowed by N.C.A.A. meeting, football meetings, Rules Committee meetings, etc. After discussion the following suggestions on June meeting was made.

Suggested June coaches meetings start on Wednesday afternoon followed by meetings Thursday, morning and afternoon (three sessions only). An excellent program to be arranged for each session and this program to be mailed to each member coach early in spring, by May 30th. A coaches dinner to be set up for Wednesday or Thursday.

This proposal will be voted on at June meeting.

The 1951 National Collegiate Track and Field Championships were awarded by N.C.A.A. to the University of Washington, Seattle, Washington, June 15-16. Director of Meet, E. S. "Hec" Edmundson. Any suggestions on program will be appreciated. Write either "Hec" Edmundson or your secretary.

Cordially,

M. E. Easton

Secy-Tres

NCTCA



# Minutes of Relay Directors Meeting

## HOTEL ADOLPHUS, DALLAS, TEXAS

Jan. 10, 1951

Last summer the idea was originated to get the various Directors of various Relays together for a meeting at the winter meeting of the NCAA. Flint Hanner volunteered to get the meeting under way and was successful in getting a very fine meeting organized. We had the following list of Relays to work from and if this list is incomplete, please notify me and we will add the names. The list is as follows:

### Known Relay Meets to Date

Meet	Place	Director
Kansas Relays	University of Kansas, Lawrence	M. E. Easton
Drake Relays	Drake University, Des Moines	Tom Deckard
Texas Relays	University of Texas, Austin	Clyde Littlefield
California Relays	Ceres, California	Thomas Moore
Compton Invitational	Compton College, Compton	Herschel Smith
Chicago Daily News	Northwestern U., Evanston	Frank Hill
Penn Relays	U. of Pennsylvania, Phila.	Francis Murray
Coliseum	U. of Southern Calif., L. A.	Jess Hill
Tuskegee Relays	Tuskegee Institute	Ross Owen
Carolina Relays	U. of N. Carolina, Chapel Hill	Robert Felzer
Purdue Relays	Purdue University, Lafayette	Dave Rankin
Southwestern Relays	Southwestern L.A. Institute	Harmon K. West
Colorado Relays	University of Colorado, Boulder	Frank Potts
Hayward Relays	University of Oregon, Eugene	Wm. Bowerman
Long Beach Relays	L. B. Recreation Dept., Mun. Aud.	Rod Ballard
Santa Barbara Relays	Santa Barbara College, S. B.	Theodore Harder
Elmhurst Relays	Elmhurst College, Elmhurst, Ill.	Robert Thompson
Beloit Relays	Beloit College, Beloit	Dolph Stanley
Harvard Relays	Harvard U., Cambridge	W. J. Bingham
Michigan State Relays	Michigan State College, E. Lan.	Karl Schlademann
Florida Relays	U. of Florida, Gainesville	Percy Beard
Iowa Relays	Cedar Falls, Iowa	A. D. Dickinson
Brigham Young Relays	Brigham Young U., Provo	E. R. Kimball
Border Olympics	Laredo, Texas	Cecil Wade
Bowling Green Ohio Relays	Bowling Green, Ohio	Dave Matthews
St. Thomas Relays	St. Thomas College, St. Paul	Don Adee
Seton Hall Relays	Seton Hall College, S. Orange	John Gibson
Arizona Relays	Arizona State College, Tempe	Don Kinzel
Southern Relays	Birmingham, Alabama	Chamber of Commerce
Fresno Relays	Fresno, California	Flint Hanner

The following representatives were present for the Dallas Meeting: Ralph Higgins, Jim Kelly, M. E. Easton, Tom Deckard, Clyde Littlefield, Herschel Smith, Jess Hill, Theodore Harder, Percy Beard, E. R. Kimball, Cecil Wade, John Gibson, Don Kinzel, and Flint Hanner.

The following items were discussed:

#### 1. Expense to Competing Athletes

Discussion on the handling of expenses to athletes competing in meets where individual stars were invited was led by Flint Hanner of Fresno. The main problem brought out came from relay meets where a lot of open or invitational events were on the program; whereas the relay meets conducted strictly for collegiate competition voiced few problems.

The consensus was that directors inviting individual athletes should direct their dealings with the competitor's coach, ex-coach, or the organization which he represents. They felt that this would lessen the problems arising from dealing with the boy directly. They further went on record as agreeing that the ath-

lete should receive—at a maximum—plane fare and \$10 per diem expenses.

#### 2. Service Teams Participating in Relay Meets

Bill Easton brought up the question of service teams participating in relay meets. In view of the mobilization picture, he felt that there would be some service men requesting competition in our various meets. It was the general feeling that if enough requests were made and enough interest shown by men in the services that they should be given permission to enter whenever possible. The general feeling was that the service teams that were competing against college boys should be considered from the standpoint of awards and news releases. As far as news releases were concerned, it was the feeling that the publicity director of these meets should so instruct the newsmen as to the placing of service teams and the placing of collegiate teams. This was, of course, to give credit to the teams according to their placing with respect to their level of competition. In regard to the awards, the practice of giving the awards to the college teams, regardless of service team's placing, and giving the service team a certificate of award for the place they won and sending them an actual prize of their certificate at a later date was discussed. As an example: if a service team wins a relay event, they will receive a certificate and first place, and the First, Second, and Third Place awards will go to the collegiate teams, with the service teams getting their first place awards at a later date.

#### 3. Discussion on Awards

The various representatives at the meeting told what they were doing in the way of awards to the Individual Event and Relay Team Members, and it boiled down to where most of the relay meets were fairly consistent in their awards—the majority giving watches for first place award, and medals for second and third and as far as fourth place. It was generally discussed that the awarding of medals, belt buckles, tie clasp with medals on them, watches, and desk clocks were appropriate awards for the athletes. The point was brought up of a situation whereby a strong relay team, competing in several relay meets in the area might win several watches during the year. The idea was presented as to the possibility of the directors getting together in that area and varying the First Place award. This was felt to be a good idea, but it was brought out that it would be fairly rare for one school to come up with a good enough relay team, year after year, to monopolize the First Place award.

#### Team Trophies

The idea of a team championship of a relay meet was discussed. It was brought out that the Kansas, Drake, Purdue, Texas Relays abandoned any team championship determined by points. These meets felt that an institution could concentrate on winning one or two relays with their best men and not have to split up their team personnel to try to get enough points in several events to win the meet championship.

The directors felt that the giving of team trophies to winning relay teams was a favorable practice if their award budget was adequate enough. They went on record as favoring the idea of an outside concern

or business being donor of team trophies. However, they believed that stipulation should be made that there be no mention of the donor other than that the trophy could carry the donor's name or title.

In regard to awards to officials, it was felt by Flint Hanner and several other representatives that the officials should be given an award like a medal or tie clasp or certificate of service as a good-will gesture. Officiating in general was discussed with the following points brought out: the number of officials needed for a big relay meet was discussed, and it was learned that Fresno has 100 officials or more—as well as Drake. The thought on this was that there should be enough officials to rotate at various events so that one group would not have to spend several hours on their feet. By rotating the officials, they could be put in the stands when finished with a certain assignment. Of course this is a particular problem for each track meet, and all persons organizing big track meets should spend a great deal of thought on selection of officials and assigning them their duties.

#### **Marshalling**

The subject of marshalling created a lot of interest and discussion, and the feeling was that the success of our track meets depends on adequate organization in handling the athlete and officials on the field. Ideas brought out were to have a section in the stands for competitors not competing, a section set aside for officials who had finished their duties and finish judges timers to be given different colored badges to designate their presence and authority at the finish line.

#### **4. Eligibility**

The subject of freshmen running in relay meets was brought up, and it concerns the meets where they have schools competing that run freshmen on their track teams. No definite recommendation was made, and the feeling was that, that was the problem of each meet and each meet would have to deal with it according to its own thinking.

#### **5. Victory Stands**

Most of the relay meets that had representatives at this meeting employed the practice of victory ceremonies. Consensus was that it added to the spectator interest at the meet but presented a problem in some cases, such as the announcing interrupting the Starter at the beginning of another race. Another problem was getting the winners and place-winners on the stand at the same time and the problem of a band playing an appropriate victory song or the fan-fare of trumpets for the victor.

Two ideas that came from this discussion were that some places assigned boys to escort the winners and place-winners to the victory stands after they had finished the event and the victory ceremonies for the various events could be printed right in the Time Schedule of Events, such as: 2:15 Victory Ceremony for the 440 Yard Relay.

From this discussion on victory ceremonies came the idea of announcing and calling of athletes to the event. It was brought out that there is no call made at the Drake and Kansas Relays as it is the respon-

sibility of the athlete to be at the starting line five minutes before his event is scheduled on the Time Schedule of Events. This has been successful over a number of years.

#### **6. Promotion**

Several ideas were donated to the group on various promotional schemes. The idea of parades was given as an illustration, and the relay meets that have parades as part of their promotion felt that it has been well worth the effort. The idea of having the Society Column of Social Events, etc., was mentioned as well as the printing of match covers to advertise the date of the meet, and, of course, many other ideas were expounded. We won't mention all of them in that we hope the above notes will give you an incentive to make it 100 per cent attendance at the next meeting of the relay directors.

One of the last and most important items: Discussion of the change of the relay personnel rule. Bill Easton, Kansas, outlined the reason for making a change in the rule, which states that four men may run on a relay team, and the four men who compose this team in the preliminaries must compete on the relay team in the finals. He outlined the reasons for change as being that if a relay team had a man who was injured in the preliminaries or who became sick after the preliminaries this would make it impossible for the team to run in the finals. He cited cases where schools would bring a team several hundred miles to compete in a relay meet and have a boy come up lame in the preliminaries or get sick after the preliminaries and not be able to run in the finals. This, of course, penalized the other three boys and a change could be made whereby a team could run if a substitution could be made. He pointed out that this was done last year at the Texas, Kansas and Drake Relays and met with very favorable results from both the standpoint of the team and the coaches. It was moved and seconded that the following rule be presented and adopted. The motion passed. The rule is as follows "A team may be permitted to enter six men for a relay team, any four of whom may run at any time."

#### **Secretary's Note**

My notes are not quite clear on what procedure was taken on recommending this rule to the Rules Committee, and I will get a clarification from the Chairman of the Track Rules Committee from further correspondence.

It was the consensus that the meeting was a very definite success and was recommended that the meeting be held in conjunction with the National Collegiate Track Association meetings in the future. I would like to urge that you all attend. In the meantime, send in suggestions as to the type of program you would like to have and follow.

There was a strong-arm decision made at the close of our Dallas meeting which made Flint Hanner, Fresno State, Chairman of the Relay Directors meeting and Tom Deckard, Drake University, Secretary for the coming year.

# Minutes of the June Meeting National Track and Field Coaches Association

UNIVERSITY OF WASHINGTON, UNION BUILDING, SEATTLE, WASH.

Minutes of the National Track and Field Coaches Association held at the University of Washington, Union Building, Seattle, Washington, Wednesday June 14, 1951.

Meeting was called to order by President Frank Hill, Northwestern and a welcome was extended to the visiting coaches by Hec Edmunson. Mr. Hill then called on the first speaker for the discussion. "Starting and Sprinting" by Mr. Clyde Littlefield Coach of Track, University of Texas.

This was a very fine and detailed job and was enjoyed by all present. Clyde tells me this article has been written up in the Scholastic Coach some time back and asks that we have another written for the Clinical Notes. This has been done.

Dave Rankin, Purdue University, Lafayette, Indiana, who took a quick trip to Finland last year gave a talk on "Distance Workout as Prescribed in Finland." These remarks are in the notes.

Recess 11:00 a.m.

The afternoon meeting was called to order at 1:00 p.m. by President Hill. Jim Kelly, Coach of Track at University of Minnesota gave a very interesting outline of his experiences with the United States Track and Field Team in the Pan-American Games last year.

Immediately following Mr. Kelley's report the President called for the report from the nominating committee for next year's officers. The following names were submitted by Chairman Jim Kelly and were accepted. This slate elected by unanimous vote in by the members present.

## The National Collegiate Track Coaches Association 1951-52 Officers

President: C. S. "Hec" Edmondson, University of Washington, Seattle, Washington; Vice President: George L. Rider, Miami University, Oxford, Ohio; Secretary-Treasurer: M. E. "Bill" Easton, University of Kansas, Lawrence, Kansas.

Advisory Committee members elected by NCAA Districts: Dist. 1—Elliott Noyes, Dartmouth (6 years); Dist. 2—John Gibson, Seton Hall (4 years); Dist. 3—Percy Beard, Florida (4 years); Dist. 4—Don Canham, Michigan (6 years); Dist. 5—Tom Botts, Missouri (2 years); Dist. 6—Clyde Littlefield, Texas (4 years); Dist. 7—Frank Potts—Colorado (2 years); Dist. 8—Jack Mooberry, Washington State (6 years); At large—Charles Werner, Penn. State (2 years).

The above officers and Advisory Committee Members elected at the annual meeting held at the University of Washington, Seattle, Washington, June 14, 1951.

Les Steers, world record holder in the high jump gave a very interesting talk on the high jump. I have written him several times for the material to put in our Notes, but have had no word from him consequently we will not have this material for you. Sorry.

Karl Schlademan, Coach of Track and Cross Country at Michigan State, discussed "A Cross Country Program for One Week." Much discussion with the coaches present followed. Many points of instruction were brought out and it was especially instructive to all.

Meeting was adjourned at 2:30 p.m.

President Frank Hill called the Executive Committee meeting to order at 2:45 p.m. After discussion it was voted to reimburse the Secretary-Treasurer annually to the amount of first class transportation to and from the site of the National Meet.

## Note to ALL Coaches:

I am anxious to have all of you receive the Track and Field News each month . . . but to get this done, you must have your annual dues check or money order to me by JUNE 30TH.

This arrangement of starting subscription at time it arrives in their office has been agreed upon between this office and the Track and Field News. Otherwise there is so much confusion as to what issues you have received and what issues are due. So draw a big red circle around your calendar date on JUNE 30TH—MAIL DUES TO NCTCA ON OR BEFORE THIS DATE.

Thanks and best wishes,  
M. E. Easton  
Sec'y-Treas.



# Organization of A High School Track Squad

BY FLOYD R. HIGHTOWER

Track and Football Coach, Highland Park High School, Dallas, Texas

We have six periods a day in our high school and all athletes are permitted to arrange their schedules in order that their sixth period is gym. In this way we can get the boys one hour earlier each day for practice and at the same time keep them working the year around in some phase of athletics.

Since I came to Highland Park as a Football and Track Coach in 1936 I have always worked under the assumption that track is a great help in making football players more agile and improves their speed. We started all boys that planned to go out for football to start the second semester in track, outfitting them in a track uniform and shoes. In this way we felt that since we could have only thirty days of spring training this would enable us to have all the boys in good condition and at the same time enable us to determine the ability of various individuals that would make up our track teams. Then at the conclusion of our District meet we could determine who was to represent the track team and those that would start out for spring training. All boys that placed first or second were permitted to remain in track and all others were started out for football. And of course all that placed in the next meet which was the Regional Meet we permitted them to stay out for preparation for the State Meet, which in number are very few.

## Early Season Workouts

We usually have around a hundred to a hundred and twenty five boys reporting out for track and football the second semester and are faced with the problem of what event to place the various and sundry individuals. All early workouts of the first month consist of fifteen or twenty minutes of calisthenics, slow easy jogging with each workout lasting about one hour. After the first six weeks we take up starts and introduce the boys to the various events, as the hurdles, jumps, weights and etc. After about two weeks of this we have our first meet, which in reality is nothing more than a meet

consisting of members of our squad, each boy being permitted to run in any event that he desires to participate in. The hundred, 220, 880, mile and the field events. Taking the time of the first three individuals in each event and recording them for future reference and comparison in meets that were to be held later. The second week is a repetition of the first week, another meet with times taken of the first three in each event and a comparison of the times made in the first meet, and as a result we can start placing the boys in the events that we feel they are best qualified.

## Inter-school Meets.

Since there are a number of high schools in Dallas we can have one or two meets every week and give the boys an opportunity to run in any and as many events as they wish. Further, we can run several heats in each event and let the boys run against the competition or bracket that their times have fitted them into. Further, as coaches it gives us an opportunity to place an individual into an event in which we feel that he may be suited to excel. For example, we believe that the 440 is one event that will bring out the competitive spirit in any youngster, and in one of these meets we require every youngster to run the 440, placing them into the bracket of competition that they are best suited according to time that they have made in practice. This event will give the coach an opportunity to observe the youngster in an event that will bring out the competitive spirit in his boys.

## Field events

We have our most trouble in the field events as to placing our men, however we follow a similar method in selecting individuals for field events, keeping in mind those things that have a tendency to point towards an individual's possibility of excelling in a certain event. For example, a boy that has speed and agility we work on the broad jump, the taller and muscular types we put in the weights-thus following the same procedure as the running events.

# Training The High School Boy For The 100, 200 And 440 Yard Dashes

BY BEVERLY S. ROCKHOLD

Track Coach, Robert E. Lee High School, Baytown, Texas

In the school in which I coach, there are usually seventy-five or eighty boys out for track. In order to have consistently good teams, it is necessary to interest a large number of freshman boys in the sport each year, so make every effort to contact all boys who show any interest whatever in coming out. There are usually about thirty-five freshmen boys out each year.

I have always advocated a slow conditioning program for all my boys, based on the belief that good track teams are not made hurriedly and that the foundation of a track team must be sound. The boys have no competition whatever until they have had four or five weeks of conditioning and then only inter-school competition.

In planning the workouts for the coastal area, we must make allowances for inclement weather and plan specific indoor activities for rainy days. On such days I show and explain pictures of track meets, have black-board talks and discuss each event as to form etc., and give warm-up exercises on mats in the gym.

At all times, I stress the fact that a boy's stomach condition is just as important as his muscular or mental condition. I believe that if a boy will eat wholesome food, and food that agrees with him, it is not necessary to follow a strict diet. I ask my boys not to eat greasy food, heavy or rich pastry, highly spiced foods, very few sweets, and to use moderation at all times in eating. If

a boy eats properly, does each activity properly each day, and gets his proper rest, he will be in condition. Condition helps very much in building confidence in the individual.

I have found that best results are obtained if the squad is divided into groups of sprint men, 440 men, 880 men etc., and each day I post a schedule of the activities for that particular day. By doing this and making each group responsible for following the schedule, I am able to work with and help all the boys. Each boy must be treated as an individual. You cannot work all of them alike. Although two sprint men can run the hundred yard dash in 10.1, they look alike and act alike, one may require twice as much work as the other to reach his peak.

Although opinions differ greatly on the subject of whether or not a boy can be over-worked or over-run in high school, I definitely think they can be burned out. I have never done this, and I shall never do it, because I would not jeopardize a boy's college career in this manner. I firmly believe that some high school coaches ruin good boys before they get to college, for in many cases boys with very good records in high school never perform well in college.

In training boys for the 100 yard dash, 220 yard dash, and 440 yard dash, I give four or five weeks of general body conditioning which consists of easy jogging, wind sprints, exercising, form striding, etc., but nothing hard or strenuous. Most of this work is done on the grass rather than the track to avoid muscle soreness and shin splints. My boys wear rubber soled cross-country shoes during this conditioning period and most of the time during the season.

I feel that it is important to keep a weekly weight chart for each boy. With this chart, it is easy to determine the intensity of a boy's workouts, and if it shows him to be losing weight too rapidly, that indicates that he is working harder than I expected him to work and the situation is then corrected.

Proper form and relaxation are two things which I think cannot be over-emphasized in all phases of Track and Field activities. I stress these points during the entire season.

About four weeks before the first meet, we begin working for more endurance and speed, and I start inter-squad competition in short runs, throws and jumps. Records of each performance are kept and posted on the bulletin board. It is at this time when I begin giving starts with the gun.

On the sprints and 440 yard dash, I have had greater success with the "bunch start" than with any other, but of course, one has to vary the start with different boys. I have found that the sprinters have less tendency to come up too fast, and they seem to drive better until they reach their full speed stride, which, in my opinion, should be in about twenty yards.

In using the bunch start, when the boy goes to his mark his feet are placed at a lateral distance of about eight inches. The right toe and the front of the left heel are placed about even. The right leg, from knee to thigh, is almost perpendicular to the ground. His hands are almost directly below his shoulders, with his weight forward and both knees pointed straight down the track between his arms. At the command, "Get set", he makes one continuous movement, keeping his elbows straight and raising his body so that the back is level or just slightly tilted to the front. The eyes are focused about ten yards down the track. Of course, if the boy is left footed, the position would be reversed.

Boys must be trained to start. I never tell a boy to guess the gun or to beat it, and I teach my boys to bring their attention to the highest peak at the very instant the gun sounds. A good starter leaves WITH the gun—not

after he hears it. I believe it can properly be said that a good starter will have motor reaction rather than mental reaction.

In the 100 and 220 yard dashes, the runner should start with vigorous arm and leg action. The action of the arms is almost as important as that of the legs. In about twenty yards, the runner should have reached his full stride. A sprint man will have high and straight knee action and good body lean.

The hundred yard dash has three distinct phases. (1) The starting stride, (2) full speed stride, and (3) driving stride or finish burst.

In the 220 yard dash there are four distinct phases. (1) The starting stride, (2) digging or full speed stride, (3) floating or coasting stride, and (4) driving stride or finish burst.

By comparison with the 100 and 220 yard dash man, a 440 yard dash man should have less leg lift, less powerful leg drive, lower and less tense arm action, and a little less body lean. He also has less bounce and does not run as high on the balls of his feet as does the 100 and 220 yard dash man.

There are two types of 440 men—the sprint type and the endurance type. The sprint type runs his race in a similar manner to the 220 yard dash, and he has four phases in his race. (1) He starts fast, (2) hits full speed stride until he gains his position, and then (3) he changes to a floating or coasting stride. The fourth phase is the driving finish. Usually this phase starts fifty to seventy-five yards from the finish, according to the individual.

The endurance type gets off to a fast start, sets his pace and maintains it all the way. A 440 yard dash man must be able to judge pace, judge his opponents, judge his finish, and he should finish past the finish tape with nothing left. If a sprint man is running the 440 yard dash, emphasis must be placed on endurance, and if an endurance man is running, emphasis must be placed on speed.

About four weeks before the first track meet, the following schedule is used as a guide for workouts. This plan is flexible, and I increase or decrease the work as necessity dictates. I also find it necessary to vary it quite often to suit the needs of various individuals.

#### 100 and 220 Yard Dash:

Monday—One lap, warmup exercises, jogging and a few wind sprints.

Tuesday—One lap, warmup exercises, starts without gun (checking form), and starts with gun. Form striding up and down football field five or six times, stride two or three 220's with a loose easy stride, pass baton, take one lap and go in.

Wednesday—One lap warmup exercises and starts. Start and sprint twenty five to thirty five yards three or four times. Two or three 75s in which he runs forty yards, coasts fifteen yards, pick up to full speed sprint on last ten yards. Pass baton, sprint 300 yards, take one easy lap and go in.

Thursday—One lap, warmup exercises, a few easy starts form only, sprint three 50s and two 75s. Pass baton, jog one lap and go in.

Friday—Warm up thoroughly.

Saturday—Competition.

#### 440 Yard Dash:

Monday—Jog one lap, warmup exercises, four or five laps of wind sprints and go in.

Tuesday—Jog one lap, warmup exercises, take starts without gun for form and then with the gun for speed and form. Pass baton, stride two to five 220s at three-fourths speed, jog a lap and go in.

Wednesday—Jog a lap, warmup exercises, starts with the gun, run two to four thirty yard dashes. Pass

baton, run either a 300 or a 660, depending on condition.  
Jog a lap and go in.

Thursday—Jog a lap, warmup exercises, starts, pass baton, sprint three to five 25 to 50 yard dashes, jog one lap and go in.

Friday—Warm up thoroughly.


Saturday—Competition.

In the southern part of the state we can attend ten track meets during the season, the seventh of which is our district meet. I try to bring my boys along so they will reach their peak just before the district meet and

maintain it for the remainder of the season. We are fortunate in that seven of our meets are invitation relays, and this enables us to enter twenty-five to thirty boys in each meet. Because of this fact, we know what each boy is capable of doing by the time we enter the district meet, and the greatest problem that confronts the coach at this time is the excess enthusiasm of his boys, who may be inclined to over-exert themselves in an effort to do their best throughout the remainder of the season. Over-work at this time must be avoided in order to prevent what we refer to as staleness.

## A Resume of the Methods and Procedures in Producing and Training High School Track Squads in the Broad Jump and the Weights

BY "SMILEY" DAVIS

Coach of Track, Corpus Christi H. S., Corpus Christi, Texas

Gentlemen:

I feel very much like a student talking to the master in attempting to talk to you—the top track coaches in the world, in your specialty field. Please forgive me for my imperfections. The best information that I have received through the years has come from you.

I shall only try to tell you what a high school coach is trying to do in the field on which I have been assigned to talk, and I feel that this is generally representative of other Texas High School coaches.

The subject is "A Resume of the Methods and Procedures in Producing and Training High School Track Squads in the Broad Jump and the Weights."

Generally speaking, I presume most of you college coaches are working with athletes who have had some experience in the events on which they are working and that you have a chance to pick boys with the physical requirements to do the things for which you have selected them. They are usually specialists whom you have to break of bad habits and re-train, or they are boys who have the proper training and need polishing and strengthening.

In high school we have the problems of taking what we have in the full male student body, testing them for special talents, interesting them in specializing in the sport, and then developing them in the proper habits that they might get the best results. Therefore, I would say that with an adequate testing program, the larger the school, the better the chances are of a high school track coach finding the type of material it takes to put on a well balanced program.

Our school at this time has a student body of around two thousand which should interest around a hundred or more boys that aspire to be track competitors in our interscholastic programs. For several years there has been in excess of that number. I have always been fortunate in working with head football coaches who realize the advantages that are gained in having the entire football personnel working in track during their off seasons. This always helps.

### BROAD JUMP

The running broad jump implies by its name the physical requirements that are essential of the participant.

Speed, spring, and agility are essential of the participant. Speed, spring, and agility are the "musts" just the same as they are in the more mature college boys with whom you work. To find boys possessing these essentials I like to work all of my sprinters, hurdlers, and jumpers in the pit. This is done at least two times each week before the season starts and one day a week during the season using mass drill procedure. The by product of this work is inevitable. During this early work I have found it to be profitable to stress work on height with a short run of 45 to 50 feet, teaching by the **part method** that height is attained by a graduated run, reaching the take-off board in stride so that the body weight is slightly in advance of the take-off or power ankle. The boys are also taught the importance of the arms in any kind of jumping, especially broad jumping.

Many times high school coaches will find boys that do not have enough speed to be a good sprinter but will have enough spring and agility to take points in all of the important meets in the broad jump.

The run or approach is a very important factor in teaching this event. A graduated run of one hundred to one hundred and twenty feet, varying with the individual jumper, seems to be best suited for most high school boys. John Robertson, Coach Littlefield's broad jumper from Texas, used in excess of one hundred and twenty feet. The best high school boy that I have had in the past ten years used one hundred and nine feet as a base. He was taught to gradually accelerate his speed the entire distance of the run, and his top sprinting speed was not attained on his best jumps. In contrast to the floating theory on the last stride or so, I have found that my high school boys gather better for the explosive rise and, therefore get better results when they are driving for the board. The difference in the wind velocity and the type of runways necessitate having a base distance for the run and altering it slightly for every meet. The jumper must be taught to take care of this with the aid of the coach.

Broad jumping is a very explosive event and we never work on it on successive days. During the competitive



season much work is done on methods to attain height, increase speed, and develop agility for flight and landing.

A profitable method of working on height is to use the short run to the board that was mentioned earlier. I employ a method of measurement of jumping height by using finish yarn stretched between the pole vaulting standards at a height that the jumpers can hardly reach but can inaccurately measure with a little help from a team mate. This is a substitute for the hurdle type barrier placed on the ground in front of the board which tends to cause most high school boys to lose their flight poise. High jumping is also an acceptable method of developing spring.

The hurdles are excellent training for broad jumpers. It tends to develop a more accurate sense of timing and distance which is essential in the graduated run.

Good broad jumpers must have speed so they are also worked for form with the sprinters on the proper body lean, leg actions, and arm actions. They are taught which parts of the body to keep loose in order to get maximum speed.

The stressing of low arm carriage just before the take-off is imperative in order to get the proper action of bringing the arms up and forward on the rise from the board. The knees are raised on leaving the board with a slight forward extension just before landing and a downward thrust of the arm to aid in forward momentum of the upper part of the body for landing.

#### THE DISCUS

The physical requirements that are most desirable in high school discus throwers are the same as those used by college coaches in selecting their throwers, with one major exception. Smaller Texas high school boys, in many cases, achieve because we use the light weight interscholastic discus, which is about a pound less in weight than that used in intercollegiate competition.

Discus throwers are not developed to their fullest capacities in one year. It is best to have them a series of three or four consecutive years. Especially is this true in Texas where we have the eighteen years rule for eligibility. A boy cannot be over seventeen years old on or before the first day of May preceding the competitive year. Many of our boys do not reach the maturity that tends to give them the explosive strength and agility necessary to make top weight men before they finish their high school eligibility.

All beginners are taught to hold the discus with the last joints of the fingers in such a manner as to enable them to release it with the index and middle fingers contacting it last, which will cause it to rotate, or spin clockwise to a right handed thrower. These beginners are not allowed to use a turn until they have mastered the art of the release to such perfection that the discus sails smoothly and lands flat while working into, or with a cross wind. With some individuals, this takes months of practice, throwing about thirty times each day. (We are fortunate in most of Texas, and especially in our section of the state, in that we have very few days when we cannot work out of doors in the sunshine.)

They are also taught to throw off of all types of footing in order to eliminate any mental hazards that may be developed by throwing from the same kind of footing constantly.

The conventional, or so-called orthodox, method of moving across the ring was employed until 1948 when I had the pleasure of talking to Coach Jim Kelley and Gordien of Minn. at the Texas Relays, where they so graciously explained and demonstrated their theory and methods. For years I have employed the hop method of movement on the first turn, which I learned from Col. Anderson of Texas A & M. This style tends to fit in

with the Minnesota method very well and with the little experimenting that I have done with high school boys I am firmly convinced that in the near future our methods will be revolutionized.

Beginners are first taught to make the hop, without the discus, from a fairly upright position. This can be practiced in mass drill. Most of my coaching troubles have come from boys trying to make the turn with too much forward body lean, which tends to make them be falling away from the discus during the release. By trial and error, I have found that this is corrected by keeping the upper part of the body in as nearly an upright position as possible and over the supporting ankle. This also tends to cause the thrower to be more relaxed in the arms and shoulders and effects the desirable trait of leaving the throwing arm well behind the movements of the body, which helps to give the centrifugal whip of the arm in the release that is essential in getting good distance. The free arm is well bent at the elbow keeping its weight nearest the body's center of gravity. Stress is placed on not watching the ground and also on touching the opposite shoulder with the throwing hand after the release which helps to keep from fouling.

The reverse after the throw is one of the hardest parts to teach high school boys, and many of their releases are made while they are in the air. This is best taught by not letting them reverse as beginners. Our state meet is held in Austin and the prevailing wind is from the south making the discus be thrown into it. I have found that better distance is gained by quartering the wind to the inside and then by including the release hand slightly up to the inside the discus will land flat and thereby get its maximum sail. The light interscholastic disc is affected very much by a headwind.

At the present time I believe there is more possibility of high school boys setting new records in the discus than in any of their other events.

#### THE SHOT PUT

It is with a great deal of reluctance that I say anything about the shot—although I have had several boys that have been fair high school putters (50 footers or better) I have never felt satisfied with the overall results of the several years of coaching it. I am hoping that I can learn much by simply explaining my simple methods and procedure and that some of you will be kind enough to help me.

Shot putters, like discus men, are developed over a series of years. It is best to select them by their physical attributes and diligence for work. The physical requirements that seem to be necessary in high school shot putters are that they be large, strong, agile, and physically explosive. The outstanding ones are usually endowed with a comparative amount of natural speed.

Beginners in this event are taught first how to hold the shot in the fingers and then how to put it from a position close to the neck, with the putting elbow out and the shoulder slightly dropped. No reverse is used in the early stages with beginners. A common fault with them is that they try to put from a position too far outside of the median line of their bodies and do too much work with the arm and not enough with the legs and body. It is well to stress that this is a very explosive event that is comparable to a hard straight right delivered slightly upward. In the winter these boys are allowed to put around thirty times a day, but never for distance, making every motion tend to go in a straight line and thereby, eliminating any lateral actions, keeping the off side arm bent at the elbow so that the carriage of that forearm is fairly close to the body.

Beginners are taught that it is an unwritten law that they take from ten to fifteen starts and short sprints each day, working on sprinting form with the sprinters because

balance, timing, and speed are essential in good shot putting.

The movement across the ring is taught first, without the shot, and then with the shot but without the putting effort. This part may be taught in mass drill if you have several beginners working together, as you will have in most large high schools.

They are taught to keep the body in an upright position at the back of the ring with the balance of weight on the rear leg. The motion of the front leg in the glide is directly down the intended line of the put. This seems not only to be the simplest method but also eliminates any lateral actions that might tend to cause for loss of balance in the movement across the ring.

Most high school boys either have a tendency to have

too much coil in the center of the ring, which will cause them to momentarily stop their forward progress, or, they hit with their body weight too far forward, and therefore do not get the force of their body into the final explosion. This part of the whole event seems to be the hardest to teach to high school boys. The next most difficult point to teach is not to start the reverse too soon.

For the competitive season it is best to sell the boys on the fact that they have to save up energy for all such explosive events, and therefore we spend our energy early in the week. However, we do not put on successive days and then we save their energy for the week-ends and the meets.

## Methods and Procedures Used In Training For The High Jump and Pole Vault in Galena Park High School

BY O. M. (WALLY) SIMPSON  
Galena Park H. S., Galena, Texas

Gentlemen, let me thank you in the beginning for this honor of bringing you a few words about our favorite subject, Track and Field. I am of the opinion that this is a gathering of the best track coaching talent in the world. We high school coaches look up to you as big brothers or as Seniors while we are Freshmen. Practically all we know about the sport we learned from you in one way or another. We know that the things that help us, help you and the better we do our job the easier your job becomes.

I am trying to produce champions just as you are but I feel a lot better if my boys are dissatisfied with their achievement and go on to college to fulfill their dreams. I feel sorry for a high school "champion" who is "cock of the walk" with no more fields to conquer.

I am fortunate in that I am the Physical Education Instructor at Galena Park. I have opportunity to uncover talent in Gym classes, in fact about half of my team are boys who were not interested in track. If I see a boy that looks good I put the entire class through the event to see how he compares to them. If I don't have a good team I believe it is because I am not interested enough in track to generate a little interest in others. I always tell my boys that if they train as hard as I do during track season we are bound to win the Championship.

If you think that some of the things I am doing in training my boys are not the best, I would appreciate it if you would tell me about it.

Let me say in the beginning that I don't expect to tell you anything new. I simply intend to tell you exactly what we do at Galena Park, and express a few pet theories that you may or may not agree with.

First I will discuss the High Jump. This is an event that I know very little about. I have had a little success coaching it especially with one boy Bill Foley. He is not quite 5'9" but was consistently jumping 3 and 4 or more inches over his head.

As to the different styles of jumping I think that it depends on the boy a lot. One boy will do best with the side roll another with the belly-roll. I wouldn't at-

tempt to say which is best of the many variations of the different styles. I let the boy pick his own style, but I try to narrow his choice to one of the two mentioned above.

I try to get my jumpers out on the track, as soon as the Christmas holidays are over, for a little jogging and limbering up each day. I have them take starts with the sprinters about two or three times a week. About the 1st of February I let them start working on their jumping form about 2 days per week. I never let them jump for height in practice. I try not to over coach, I believe that if a coach will observe and say very little the boys will do a better job. Track is very different from all other sports, a boy can only learn to do by doing and very little from being told what or how to do.

I like for the boys, to learn early how to approach the bar and to reach their maximum height over the bar. I believe this can only be accomplished by developing a relaxed stride in the approach and hitting the take off at the correct distance from the bar. We have the boys do several stretching exercises to loosen and relax the leg muscles.

We sometimes let our jumpers run the hurdles, pole vault, run on the relays etc. I doubt that some of this is good for the boys. Last year I let my best high jumper run on the mile relay in the last 3 meets prior to the State Meet. I am sure that knocked him out of a place in the State Meet, he had placed the year before and shouldn't have had any trouble placing last year. It is in things like this that we are called upon to decide between what is best for the boy and what is best for the team.

I believe early season work should consist of lots of jogging which should be decreased as the competitive season nears, we give a lot of starts and dashes in February, a lot of early season jumping for form at about 8 or 10' under best effort, while on warm days we might let a boy jump within 4" of his best record. Of course if a boy is new we don't know his possibilities so we let him work on form at a height that he can make easily 4 out

of 5 times. We never let them jump two days in succession and try not to let them jump with sore legs. We show moving pictures of good jumpers in action. This helps the experienced jumper pick out a few things that will help him and can give the inexperienced boy a few ideas on how he is supposed to jump.

After our first meet of the season we usually let the boys jump 2 days for form before the next meet comes up. If a boy begins to fall off in mid-season, we feel like he has been jumping too much, we either have him pass up a meet or let up in practise.

When we go to a meet we have the boys stay off of their feet until time to warm up for their event. Standing too long makes them dead on their feet, no spring in their legs.

I like for the jumper to approach the bar in an unhurried, leisurely manner, a relaxed but determined jog with the last 3 strides a little faster with a crouch or bunch to create a little more weight on the feet and a little more bend in the knee of the jumping leg. I think 7 or 8 strides is long enough for their run.

If it seems that I have rambled around in this talk it is because I'm not used to this sort of thing.

#### **Pole Vault**

I would rather have a tall, fast boy of average build, the short boy doesn't have much chance in either the high jump or the pole vault although there are always exceptions. I have one vaulter that is barely 5'7" and weighs 125 soaking wet, but is all power from the waist up. Another boy is 5'9" and a 3rd boy is 6'. In early meets the 5'7" boy showed up best, the 6' boy wanted to quit vaulting and just stick to the hurdles and sprint relay. At the end of the season the tall boy was my best vaulter. If all 3 of these boys go to college (the tall one is in college now) I would say their records in college would be in proportion to their height, of course this will not always hold true, because, the difference in interest and ambition will change this somewhat.

We try to get our vaulters out as soon as possible, about the middle of November. We have them do lots of jogging in cross country shoes. After a couple of weeks we let them take a pole and work in the pit, about 3 days a week with no standards—just the boy, the pole, the box, and the pit. (Let me say right here that the name "pit" is taken to mean just that. In too many places a pit is just a hole with a sand covered bottom.)

During this pre-season training we stress the need of a lot of calisthenics. We want them to do a lot of chinning, push ups, and hand stands. My two best vaulters are capable of doing 40 chins and can walk all over the place on their hands, they can do push ups while doing hand stands.

After 3 weeks or more we let them take the standards out and put the bar up about 9' on the 1st day, we let them go a little higher on Wed. or 2 days later. Friday we

let them vault within 6" of last season's best record if they are experienced vaulters.

I have never let a boy try for a new record in practice until the season was over. I haven't been convinced, yet, that it is good to knock that bar off 4 out of 5 times, the rules will allow only 2 out of 3.

We have the boys work a lot on their run, approach and take off. If a boy can learn these things and learn to pull up at the right times he's "got it made".

I like for my boys to take a long run, pick up speed gradually and be able to relax and "gather" the last 3 strides before hitting the take off. I like a medium pole carry, this will vary a little with the height of the boy. The boy should take off with the foot nearest the pole, left foot for right handed vaulter, but there are exceptions to this.

I don't try to teach a boy to jack knife. I believe a simple layout or fly away is better and a lot easier learned. With a vigorous pull up, push up and off the law of gravity will take care of the rest.

During the competitive season I have the boys vault 2 days and work with the sprinters and hurdlers the other 2 or 3 days. We always get a light workout the day before a meet. I try to time the workouts so that boys will go to the showers just before instead of after they have had enough.

If a boy is capable I encourage him to enter other events although I am convinced a vaulter can do best doing nothing but vaulting in meets unless he can make the 440 relay or run the high hurdles. He must keep his mind on his event during the meet.

The first thing the boys do when we go to a meet is take their poles to the pit and measure the runway to determine their starting point. We usually use a pole to measure with, it is too hard to keep up with a tape. After they are satisfied that everything is in order I have them get off their feet until time to warm up.

I believe off the track training is just as important as on the track. To become a Champion a boy must develop a clean mind as well as a clean body. He must get plenty of sleep, early. He must not use liquor or tobacco. He must eat regularly, learn what foods he can use and how much. I hate to see liquor and tobacco ads in track programs, they are not good for the sport, we can very well do without their support.

Before you can have a good track team you must have a burning interest in the sport and in the boys trying to make your team. If you have a good team it is not only because you know something about the sport but because you are intensely interested in it. The coach that is an example of clean thinking and living is the coach that develops champions.

Let me thank you again for this honor of being here and talking about my favorite subject...Track. And may all of you go back home and win that Conference Championship...I AM.



# Report on the "Committee for Standardization of Track and Field Rules"

BY CHARLES WERNER

(Penn. State) Chairman

Mr. Chairman, fellow members of the NCTCA, gentlemen:

I am very happy to have been asked to speak to you at this meeting regarding the "Committee for Standardization of Track and Field Rules." Many of you are aware of the existence of this committee but few know of its organization, purpose, and accomplishments. It is very much in order that these items be explained to you for many reasons. First of all—you are and should be interested in the workings of such a group—not only to be abreast of the times, but to contribute your valued suggestions—which will at all times be most welcome received by the committee.

A brief history of the events leading up to the organizing of the committee is as follows:

For a great many years, the fine sport of track and field progressed and grew under the guiding rules of many varied governing bodies. A track meet consisted of events set up and governed by the rules which the local sponsoring body deemed to adopt. These meets served their purpose and seemingly placed no hardship on any but athletes who competed at the many and varied places. Since the local boys were at no bother under these conditions—nothing was done to correct the situation. I refer to meets which differed in such times as—the number and types of events, the order and sequence of occurrence in the meet, the manner of rules of competition, eligibility of contestants and many more.

As time went on, intersectional meets flourished and a definite need for one set of rules became apparent to all concerned. Let us select a period—say the 1920's and describe conditions as of that time. During the 20's, the main governing bodies which set up and dictated the rules for our sport included: **The I.A.A.F.** (including the Olympic Committee, the **N.A.A.U.** (which conducted our Olympic trials and selected the team), the **IC4A**. (the eastern collegiate group and oldest sports organization in this country), the **N.C.A.A.** (the over all-inclusive so called parent association which included practically all collegiate assns.), the **Y.M.C.A.—Y.M.H.A.**—etc. (under whose rules many clubs, industrial and similar bodies operated), the **N.F.H.S.A.A.** (parent body for the many state High School Athletic Assns.). Each of these fine organizations served a purpose—and each was stubbornly independent and self sufficient to the point where a unified set of rules would be most acceptable providing "all others adopted ours". Each group had the opinion that "our rules are best" and if the others wish to adopt them we'll "play ball".

I recall the efforts of men like Major Griffith, Alonzo Stagg, Tom Jones, Avery Brundage and, if I'm not mistaken, Douglass MacArthur—all seeking one harmonious governing body for our sport. The coaches over a long period have also made efforts along these lines. Progress was thwarted over the years mainly by the pride and independence of the varied governing bodies, plus the reluctance to adopt an attitude of "Give and Take" for the mutual benefit of all. Meanwhile, the situation was becoming intolerable. Some schools bordering more than one governing body (for example, belonging to **IC4A**, **N.C.A.A.**, and **N.A.A.U.**) competed one Saturday under one set of rules and succeeding Saturdays under different

rules and in the summer under again different rules. This meant different events—different order of events (which permitted, or not, doubling)—different number of trials, etc. At times the various bodies became quite embroiled and almost at swords points with each other. Many bitter feelings arose from the situation—yet the efforts towards the goal of one governing body and set of rules was continued—oftimes deep in the background of other matters.

Following the last war (World War II) it seemed that the time was ripe for a revitalized effort, and a committee was formed. Actually it grew out of a bull session where things for the betterment of the sport were being discussed. Being present at the time, it seemed apparent to me that the ones taking part in this session were the same ones who had made contributions annually to the sport in many ways. They were religious in attendance and devoted to bettering things. These were the men who did not hesitate when called upon to fill in here or do this or that. It seemed to this group that to organize for the common purpose was very much in order. They also felt that a splendid and all important bit of ground work had been laid by the cooperative workings of **Asa Bushnell**, **Dan Ferris** and **Tug Wilson** who were and still are the key men in the three large governing bodies.

Therefore, in conjunction with the 1949 **N.C.A.A.** track championships in Los Angeles a meeting was held and a committee for "The Standardization of Track and Field Rules" came into being. The initial meeting held at the **Mayan Hotel**, Los Angeles, June 18, 1949, accomplished very little beyond the selection of members, officers and the appointment of sub-committees. As set up now, our purpose is to arrive at one set of rules for the sport. Members of the committee represent every governing body in the U.S. including the **I.A.A.F.** Every member is assigned to a sub-committee whose duty it is to make a report on an assigned subject at the succeeding meeting. We do not make rules, we discuss them—do research on them—take questionnaire polls on them and try to arrive at an acceptable conclusion and then we recommend to the governing bodies the adoption of our findings. This recommending is not done by letter—but by personal report to the governing body by the member of that body in attendance at the "Standardization Committee" meeting. The committee has had three meetings to date, and member attendance along with the work done by sub-committees has been most gratifying. We are not hurrying, and by this very thoroughness which comes with not rushing things, we feel that we are on the road towards our goal. At this time it is gratifying to report that the various rules committees of the **IC4A.**, **N.A.A.U.**, **N.C.A.A.**, and **N.F.H.S.A.A.** (high school group) are aware of the workings of the "Standardization Committee" and refer many of their rule problems to this committee for mutually acceptable recommendations.

Since one of the premises of the committee is to work quietly, in the background and to avoid publicity, I will not give you the names of the members. If you have a suggestion, send it to the chairman of the rules committee of any of the key governing bodies with a note

referring it to the "Standardization Committee" and it will get there.

Perhaps the major achievement to date is the adoption by the I.C.4A. and N.C.A.A. of an identical order of events along with rules of competition for the field events.

Some of the sub-committee problems to be reported on at this meeting include:

1. **The referee.** (Some advocate granting referee discretionary power—as Stag did in changing relay result U.S.C and U.C.L.A.) (Wilt-Gehrman) etc.

Whereas, the present rules are specific—it is a foul—regardless of intent and must be ruled so (just like cutting 2nd base) we have many who prefer substituting "Equity for Law".

2. **The Inspector.**

3. **The Surveyor.** International rules permit a deviation of 1 to 1000 (1 ft. in 1000 ft., etc.). Our record application blanks fail to mention this essential for a World's Record acceptance. Feeling that I.A.A.F. rules best on this.

4. **Standardization of implements.** (consult all manufacturers). Suggested "if a competitor has an implement meeting all requirements—not of a type provided—he may give it to the games committee for use by any or all during entire meet".

5. **Revised Scoring.** Possible change to 8-5-3-2-1. wherein 1st is worth 2nd and 3rd, 2nd worth 3rd and 4th, 3rd worth 4th and 5th and 4th worth twice 5th. Also look into relay score in duals 10 and 5.

6. **Staggered starts.** Sub-committee to present all rule and figures acceptable for all. At present all rule books are weak on this point. It has been observed that not all runners, in a staggered race, start on straightaway—they should! N.C.A.A. rules do not include 48" lane staggers.

7. **Starting.** Consensus was that all rule bodies consider adoption of this working "If a competitor leaves the mark with hand or foot after the word "Set" but before the "Shot", it shall be a false start. Further—"It shall not be a fair start if the gun is fired while any competitor is in motion."

A good man on the loud speaker can help by informing a booing crowd after "name runners" are disqualified, by saying:—

"DO YOU WANT TO SEE WHO IS THE BEST RUNNER HERE, OR WOULD YOU PREFER SEEING WHO CAN BEST BEAT THE GUN AND GET THE MOST UNFAIR START? WE HAVE RULES AND WOULD LIKE TO HAVE YOUR COOPERATION IN HELPING US ENFORCE THEM. IN THIS WAY—YOU WILL SEE THE BEST RUNNER HERE EXACTLY AS SPECTATORS AT THE OLYMPIC GAMES SEE THE OLYMPIC CHAMPION. THANK YOU."

## 8. Field events.

I.C.4A. has 4 prelims in pairs and 4 finals.

N.C.A.A. has 4 prelims in pairs and 3 finals.

I.A.A.F. has 3 prelims and 3 finals.

Suggested all groups consider this and revise rules—group felt that perhaps the International rules were best.

9. **Order of competition in field events.** Consensus favored N.C.A.A. part which specified "in reverse order".

10. **Hurdle rules.** All books differ on specifications of hurdle (wt., push over poundage, base dimensions, etc.). Group leaned towards an acceptable rule with simple wording. At present the International seems best.

11. **Javelin throw.** All will probably follow throwing from behind the "arc" (lane 4 meters wide and arc drawn with 4 meter radius. Four meters is 13' 1½").

12. **Pole Vault and High Jump.**

(a) International rules—13'1" maximum and 12' minimum pit.

(b) Olympic rules permit a man to drop pole and run through.

(c) Rules not clear on penalty for use of knobbed pole.

(d) Vault box rule not identical (should back end be perpendicular to ground or to slope board.

(e) Cross bars.

13. **Discus circle.** International rule—vertical circle sunk 2 centimeters. Feeling was that collegiate rules best—ask change to this.

14. **Relay exchange.** Committee not sold on any one method, but all opposed to alternating.

15. **Races run in lanes—staggers.** Europeans laugh at our Record Conscious 1st and 2nd turn staggers. They say it simply postpones the mayhem. Olympic 800 meters start on a line and considered "quite a rat race". It seems that with added speed over the years we have altered rules towards sprint rules. Suggested that "Wherever possible—the 1st leg of the mile relay be run in lanes all the way".

The foregoing gives you some idea of what the committee is attempting to accomplish. It is a composite group of devoted men representing all governing bodies—willing to give and take for the betterment of the sport. To date we have had the best of cooperation from everyone, and the ultimate objective of one acceptable set of rules for track and field seems closer to reality.

Obviously the work of this committee as well as that of other committees may be shunted aside by the terrific impact of the present world situation.

Speaking for the entire committee, may I thank you for the opportunity to make this report, and ask for your continued advice and cooperation.

# Athletic Competition In South Africa — 1950

RALPH HIGGENS

Track Coach, Oklahoma A-M College, Stillwater, Okla.

The track and field competition of South Africa is such as you might expect from a population of a state of 2½ million people except there is no organized coaching such as we have here in the U.S.A.

They sadly lack trained coaches in their pre college work, there is little competition for them at that level and practically none at all in their field events. For this reason alone, the field event competitors we met were sadly outclassed.

The universities and colleges (not over 8 in all) have no organization for intercollegiate athletics consequently do not have trained sports coaches but what few track and field men they have come to the fore in the physical education work—they are becoming aware of their deficiencies but nothing has been done along that line to date.

The men we met were mainly members of athletic clubs in the cities of the union. These clubs are doing their best to foster all sports. Naturally thru this medium and also from the fact that most young men in South Africa do not enter colleges when they finish their high school but go into the strenuous business of earning a livelihood; the majority of the competitors are much older than our men.

Tom Lavery, who holds the British Empire high hurdle record of 14.1 sec. is 38 years of age, a veteran of world war II, who was captured and held prisoner. When he was released he was down to 90 lbs. Today he weighs 175 lbs. He learned to hurdle after he returned home and it was in recent years that he set the record in the British Empire games, and he ran well this year.

Denis Shore is the fabulous sprinter who first competed internationally in the Olympic games at Berlin in 1936 in the 400 meters and who maintained his 440 championships of South Africa until last year when food poisoning laid him low. He still holds their record at 47 sec. and defeated our 440 man in their first meeting with a fine 48.3 sec. performance. He has won over 2,000 races in the 100-220 and 440, and is a self made track man and is training now for a shot at recapturing his title in March.

In one meet we even competed again a shot putter who competed against our team that toured South Africa in 1931.

The team of 1931 made a great impression and techniques and training methods that were in vogue in that

year were still being used. That team served as a tremendous stimulus to track and field in the union.

There was little, if anything of benefit, as far as training and techniques, that we could bring back with us; however, we were everywhere besieged, in the main by the athletes themselves, for training instructions, techniques and organization of meets which was freely given.

The young men I was fortunate to accompany were a distinct credit to our universities and colleges and to the United States in every way and left a host of friends and created a great deal of interest in track.

We were fortunate enough to make a three day tour through the Kruger National Park (a region some 300 miles in length and from 40 to 70 miles in width lying along the N.W. border at elevation around 1200 ft. where you can see in their natural environment wild game in abundance. Trails have been built through the area as well as rest camps where you are required to stay at night. You are required to stay in your cars and may expect to see lions, giraffe, antelope (many varieties) elephants, baboons, hyenas, wild dogs, buffalo, zebras, and leopards at any time.

The country on a whole is like the S.W. USA with sunny semi arid climate of S.W. Oklahoma, Texas and New Mexico and Arizona and then into tropical grandeur along the Indian Ocean Coast and all the glories and beauties of the California Coast.

As you all know, we left U.S.A. August 17, spent five days in Portugal where we competed in three meets, and then from August 23 to November 9 in U. of S.A. where we competed in 17 more meets.

We met the pick of South Africa three times and were fortunate enough to win all meets.

In all we competed in 20 meets.

At no time did the group of young men show any signs of homesickness which shows you the caliber of hospitality that we met.

After I put the boys on the plane November 9th (they returned via Paris—3 days—and London—2 days—) I stayed on for ten days and relaxed by going lion hunting. Fortunately I found no lions.

Thank you for your kind attention and as the Afrikans say—Alles fon du beste—Jotsiens.



# A Suggested Plan Of Standardization For Track And Field Starting Rules

BY COACH BOB STREHIL

Director of Athletics, Pomona College, Calaremont, California

## Rule—STARTER

The STARTER shall have entire control of the competitors at the marks, except as provided for in the duties of the Clerk of Course, and shall be sole judge of the fact whether or not any competitor has gone over his mark.

The STARTER shall start all races by the firing of a pistol (except that in time handicap races the word "go" shall be used) of not less than .32 calibre, with powder giving a distinct flash, and so held as to provide a background against which the flash is clearly discernible.

All questions concerning the start shall be decided by the STARTER.

The Games Committee may appoint an Assistant Starter, with power of recall in the case of an unfair start. In indoor races the Assistant Starter may also recall following a "spill" on the first turn. The use of an Assistant Starter is especially recommended in the case of "staggered" starts where one Starter has difficulty in watching the entire field.

Note—for information regarding use of "starting blocks" and "starting gates" see rule on equipment.

## Rule—METHOD OF STARTING

When the STARTER notes that the competitors are in readiness to start he shall signal the Head Finish Judge by one long whistle blast and receive in return two short whistle blasts indicating that the "finish" officials are ready.

The STARTER shall then direct the competitors to "get on your marks".

After allowing ample time for them to do so, he shall instruct them to "get set". Then, after an interval OF AT LEAST TWO SECONDS, and when all are set and MOTIONLESS, he shall discharge the pistol. (At all international meetings, the words of the STARTER in his own mother tongue, shall be: "On your marks", "Set," followed by the procedure indicated above).

If any portion of the body of any competitor touches the starting line or the ground in front of the starting line before the pistol is fired, it shall be considered a false start. The STARTER shall warn the offender or offenders and shall disqualify each at the second false start. After the pistol has been discharged, if in the

opinion of the STARTER, the start has not been a fair one, he must recall the competitors with a second shot. No warning penalty shall be given a competitor in the case of a recall, but the STARTER may caution competitors at his discretion.

## SUGGESTIONS

The STARTER should use a gun which can be cocked.

The STARTER must have at least two good cartridges in his pistol before starting any race.

The STARTER usually finds it necessary to penalize only one man for a false start. By, saying "stand up" quickly as soon as any competitor has broken, the STARTER can usually save from penalty all runners who may be led off by the one who makes the false start.

When the Starter sees that the men on the marks are nervous and unsteady he should call them up and attempt to steady them.

At starts, where the competitors are not placed behind the same starting line (200-400m. races on circular tracks) the STARTER shall so place himself that the distance between him and the different competitors is approximately the same.

On athletic fields where the STARTER can not place himself in such a position, the pistol should be placed there and discharged by an electrical device.

In starting races in decathlons and pentathlons, the STARTER will penalize each competitor, after the second false start, one one-hundredth of the distance of the race for each false start above that number. After four false starts the competitor at fault shall be eliminated from the event in which the offense was committed.

The Rules Committee recommends that in case a competitor pursues tactics at the start of a race which are obviously for the purpose of disconcerting an opponent, the STARTER shall warn such competitor and if repeated shall disqualify him as though he had made a false start.

## Suggested equipment for STARTER:

- (1) Colored sleeve for starting arm.
- (2) Platform to place STARTER well above ground level.
- (3) Dark background board to be held behind starter's gun.

## Amateur Athletic Union of U. S. Track and Field Rules.

### Rule XXVI

#### STARTER AND METHOD OF STARTING

1. The Starter shall have entire control of the competitors at marks, and shall be the sole judge of fact as to whether or not any man has gone over his mark.
2. All races shall be started by the report of a pistol, except that in time handicap races the word "Go" shall be used.
3. Where a pistol is used it should be of not less than 32 calibre, with powder giving it a distinct flash, and so held as to provide a background against which the flash is clearly discernible.
4. All questions concerning the start shall be decided by the Starter.
5. After the Starter has given the signal to the runners to "Get Set", if it should be that before the starting signal

is given, either or both or a competitor's hands or feet, or any part of his body, shall touch the starting line or anything in front of the starting line, it shall constitute a false start.

6. If, in the opinion of the Starter, a false start has been made, he shall recall the runners by a second pistol shot. The Starter shall not discharge the pistol while any competitor is in motion after the order is given to "Get Set." If he does fire the pistol and then recalls the runners, no penalty shall be inflicted upon any competitor for making a false start. However, if he gives the command "Get Set" and any competitor breaks before the Starter can call him up or fire the pistol, the official has no alternative but to penalize the offender.
7. No penalty shall be imposed for the first false start but the Starter shall, except in the pentathlon and decath-

lon, disqualify the offender or offenders on the second false start.

8. The Starter shall also rule out of the event any competitor who attempts to advance himself from his mark as prescribed in the official program after the Starter has given warning to "get ready."

9. The Starter must have at least two good cartridges in his pistol before starting a heat.

10. Should the Starter have occasion to warn the competitors on any point, he shall order the competitors to "stand up".

11. The Starter shall forthwith report to the Referee any misconduct by any contestant at the start. The Referee shall have authority to disqualify or otherwise punish such contestant.

Note—See Athletic Rule 26, Section 5, as to the position of starting line and finish line. The line painted or placed upon the ground is in front of the theoretical starting line and must not be touched by the competitors.

## The Official National Collegiate Athletic Association Rules of Track and Field Athletics

The Starter shall have entire control of the competitors at the marks, except as above provided for in the duties of the Clerk of Course, and shall be sole judge of the fact as to whether or not any man has gone over his mark. He shall be responsible for starting the track events promptly after the men have been assigned their positions by the Clerk of Course. He shall also be responsible for unnecessary delay in continuance of said events. He shall give a signal by a bell or pistol shot at the beginning of the last lap in each distance race.

The Games Committee may appoint an Assistant Starter, with power of recall in the case of an unfair start. In indoor races the Assistant Starter may also recall following a "spill" on the first turn. The use of an Assistant Starter is especially recommended in the case of "staggered" starts where one Starter has difficulty in watching the entire field.

When starting blocks are available, no holes shall be dug.

### Rule 21 — Starting

When the Starter receives the signal from the Head Finish Judge that everything is in readiness, he shall direct the competitors to "Get on your marks". After allowing ample time for them to do so, he shall then instruct them to "Get set". Then, after an interval OF AT LEAST TWO SECONDS, and when all are set and MOTIONLESS, he shall discharge the pistol. If any portion of the body of a competitor touches the starting line or the ground in front of the line before the pistol is fired, it shall be considered a false start. The Starter shall warn the offender and shall disqualify at the second false start. If however, the Starter fires the pistol and then recalls the runners no penalty shall be inflicted.

Suggestion—The Starter should use a gun which can be clocked. When the Starter sees that the men on the marks are nervous and unsteady he should call them up and attempt to steady them. However, if he gives the command "Get Set" and any competitor breaks before the Starter can call him up or can shoot the gun, the official has no alternative but to charge this offense as one break. If he does not do this he is not fair to the competitors who have held their marks.

The Starter usually finds it necessary to penalize only one man for a false start. By saying "stand up" quickly as soon as any competitor has broken, the Starter can usually save from penalty all runners who may be led off by the one who makes the false start. In the

### Rule XXVII

#### STARTING GATES AND STARTING BLOCKS

In any track event starting gates and starting blocks or foot supports may be used, not as material aid to the runner but to protect the track and to expedite carrying out the program. Hand supports are not allowed. If starting blocks are used, both feet must be in contact with the track while starting. Starting blocks or foot supports must be constructed entirely of rigid materials. They may be adjustable but must be without springs or other devices to give artificial impetus to the runner. Inasmuch as their purpose is to expedite carrying out the program and to protect the track, they shall all be so constructed that they may be placed and removed quickly without damage to the track.

The use of an approved type starting gate shall be permitted for all sanctioned meets including district and national championships.

JOAN the official national collegiate athletic association Rule 11—Starter

event two or more men break simultaneously the Starter has no alternative but to penalize all of them.

When starting blocks are available, no holes shall be dug.

The Rules Committee recommends that in case a competitor pursues tactics at the start of a race which are obviously for the purpose of disconcerting an opponent, the Starter shall warn such competitor and if repeated shall disqualify him as though he had made a false start.

#### Questions and Answers on the Rules

##### Rule 21.

Q - Does an illegal premature (or "jump") start call for a penalty in every instance?

A - Yes, under NCAA Rules there is no option, provided the Starter does not fire the pistol to start the race.

Q - What constitutes a "jump" start?

A - A runner may be able to get into action faster than his competitors because of faster mental reaction. This does not, however, entitle him to be rising from his mark when the gun is fired. A false start should be charged to the offender if the gun has not been fired. The Starter has sole control over this part of the competition; his decisions may not be questioned.

Q - What is the correct crouch start position in so far as the hand position is concerned?

A - The rules state that no part of the competitor's body shall touch the ground on or in front of the mark before the starting signal is given. Many track athletes do not understand this point and often violate the rules by placing the hand slightly ahead of the starting line. The front foot and hands may be placed up to the starting line but never on or beyond it. There is no rule that prohibits a leanover; in fact, this is a recognized point in the standard start.

Q - Are starting blocks legal?

A - Yes, provided they are rigid foot blocks without spring which may be quickly placed. Hand blocks are not permissible.

Q - In relay races will a whole team be disqualified if the first runner of a team makes two false starts?

A - Yes, Coaches should be careful to place a steady man in the lead-off position. While the starter usually shows more latitude in starting relay races in the strict application of the false start rule, nevertheless he has no alternative but to disqualify the team if the lead-off man makes two false starts.

# Intercollegiate Amateur Athletic Association of America

## Rule 13—STARTER

1. The Starter shall have control of the competitors at the start of a race, and shall be the judge of fact as to all matters pertaining to the start and to the violation of the starting rules, subject only to the Referee.
2. All races shall be started by the firing of a pistol of not less than .32 calibre. The Starter's pistol shall at all times have at least two good cartridges containing powder giving a distinct flash; when fired, it shall be so held as to provide a background against which the flash will be clearly discernible.
3. When the Starter receives from the Referee or the Chief Judge at the Finish a signal that everything is ready, he shall direct the runners to get on their marks. He shall then order them to "Get set," and when all are set and motionless, he shall fire his pistol for the start of the race. He shall not fire his pistol while any competitor is in motion after the order to "Get set."
4. After the Starter has given the order to "Get set," if any runner touches the ground in front of the starting line with his hand, feet or any other part of his body before the starting signal is given, it shall constitute a false start, and such runners shall be charged with a false start regardless of the reason for such action. The Starter shall strictly enforce this rule, and shall have no alternative but to penalize all such offenders as herein-after set forth.
5. When a false start as above has been made, or when the Starter has occasion to warn the runners on any

point, he shall order those still on their marks to stand up, and no false start shall be charged against any runner who there after advances beyond the starting line.

6. If the pistol be fired after a false start by any competitor, the Starter shall recall the runners by a second pistol shot, and in such case, no competitor shall be charged with a false start.
7. No penalty shall be inflicted upon any competitor for his first false start, but he shall be disqualified for his second false start in any heat or final of a race.

## Rule 14—STARTING LINE

1. The actual starting line shall be a theoretical hairline drawn across the track between the starting posts. To aid in maintaining a straight and even starting line, a worsted thread or tape of material which will not interfere with the runners may be laid along such starting line, flush with the ground.
2. To aid the runners and officials, a strip of easily discernible width (preferably not more than 2 inches wide on outdoor tracks, or three-quarters of an inch wide on indoor tracks) shall be painted or laid upon the track. That part of such line nearest to the starters shall be even with the theoretical starting line, and all of its width shall be within the distance to be run, so that the competitors may not place their hands upon such line at the start.

## Rule 15—STARTING BLOCKS

A competitor in any track event may use starting blocks, but shall use only such starting blocks as are provided by the Association.

# International Amateur Athletic Federation

## Rule 11

### THE STARTER

- 1.—All questions concerning the Start shall be decided by the Starter.
- 2.—The Starter shall have entire control of the competitors on their marks, and shall be the sole judge of the fact whether or not any man has left his mark.
- 3.—All races shall be started by the report of a pistol or any similar apparatus.
- 4.—At all international meetings, the words of the Starter in his own mother tongue, shall be: "On your marks", "Set", and then when all competitors are "Set", i.e. steady on their marks, the pistol shall be fired.
- 5.—If a competitor leaves his mark with hand or foot after the word "Set" but before the shot, it shall be considered a false start.
- 6.—The Starter must warn the offender or offenders and shall, except in the Pentathlon or Decathlon, disqualify at the second false start.
- 7.—If in the opinion of the Starter, the start has not

been a fair one, he must recall the competitors with a second shot (a faulty start). In this case he may warn the competitors at his discretion.

- 8.—If the Starter has to warn any competitor after the word "Set" because of unsteadiness or any other reason, he shall order all competitors to stand up.

- 9.—Starting blocks or foot supports may be used, not as a material aid to the runner but to protect the track and to expedite carrying out the programme. Hand supports are not allowed. If starting blocks are used both feet must be in contact with the track while starting (For apparatus, refer to Rule 72).

- 10.—At starts, where the competitors are not placed behind the same starting line (200-400 m. races on circular tracks) the Starter shall so place himself that the distance between him and the different competitors is approximately the same.

- 11.—On athletic fields where the Starter can not place himself in such a position, the pistol should be placed there and discharged by an electric device.

# National Federation Edition of Track and Field Rules

## Rule 3

Section 8. THE STARTER has jurisdiction over competitors at the starting line except for those activities assigned to the Clerk of the Course (Section 4). He is sole judge as to whether any competitor goes over the starting line too soon. He is responsible for starting the track events promptly after the men have been assigned their positions by the Clerk of Course and informed of the

number who will qualify in the heat. He is also responsible for unnecessary delay in continuance of events. He shall give a signal by a bell or pistol shot at the beginning of the last lap in each distance race.

The Starter may at his discretion appoint an Assistant Starter, with power of recall in the case of an unfair start. In indoor races the Assistant Starter may also recall following a "spill" on the first turn. The use of an



Assistant Starter is especially recommended in the case of "staggered" starts where one Starter has difficulty in watching the entire field.

## Rule 6

### Starting and Finishing

Section 1. Each race, except a cross country run, shall be started by the report of a pistol fired so its flash will be visible to the TIMERS. A snapped cap is not a start. If the start is unfair, the Starter will recall the runners by a second shot. After the Starter gives the order to "Get Set", if any competitor is in motion, the Starter shall not fire the pistol. The cross country run may be started by the order "go".

Section 2. THE MECHANICS OF STARTING include the following: The Starter must receive a signal from the Head Finish Judge that the Judges are ready. He shall order the Competitors: "Get on your marks". After allowing ample time for them to follow this order, he shall then instruct them to "Get set". Then, after an interval of at least two seconds, when all are set and motionless, he shall fire the pistol. If any part of a competitor's body touches the track on or ahead of the starting mark before the pistol is fired, it is a false start and the pistol should not be fired. The offender shall be warned and shall be disqualified, if he makes a second false start. If, however, the Starter fires the pistol and then recalls the runner, no penalty shall be enforced.

Note: It is best to use a gun which can be cocked. When the competitors on the marks are nervous and unsteady, the starter should call them up and attempt to make them steady but if the order "Get Set" is given and a competitor breaks before the Starter can call him up or fire the gun, the Official has no alternative but to charge it as a false start. To rule otherwise would be unfair to competitors who have waited.

Usually it is necessary to penalize only one man for a false start. The starter can save other competitors from also making a false start by ordering them up as soon as one competitor has made a break. Of course, if two or more break simultaneously, all of them must be penalized.

The digging of starting holes should be discouraged, except when the start is on a track spur which will not be used as a course. The use of starting blocks for the feet makes the digging of holes unnecessary. Their use is legal and should be encouraged.

If a competitor uses tactics at the starting line which are obviously designed to disconcert, he shall be warned and, if the tactics are repeated, he shall be disqualified as though he had made a second false start.

#### Section 2-Starting

15s-In one of the races, Al is in forward motion after the "Set" position has been taken but the Starter fires the gun. **Ruling:** The Starter should recall the runners by firing the pistol the second time. Each runner is entitled to an even start with his competitors and a competent Starter will always recall the runners, if one of them has obtained an unfair advantage at the start.

16s-In the above case, should the offending runner be charged with a false start? **Ruling:** No, if the runners are recalled before the pistol has been fired, the offend-

ing runner should be charged with a false start, but if the pistol is fired, no runner is penalized.

17s-Al loses his balance after being in the "set" position and makes an illegal start. May the Starter warn the offender instead of charging him with a false start? **Ruling:** Not unless the act occurs at a time such that the gun is fired. If the gun is not fired, the offender must be charged with a false start and it is his second, he must be disqualified.

18s-Al is rising from the "set" position when the gun is fired but does not touch the ground on or over the starting line until after it is fired. **Ruling:** This is not a fair start but since the gun has been fired, no competitor is charged with a false start. The runner should be recalled. When a competitor attempts to gain an advantage through being in motion prior to the firing of the gun, the Starter should withhold the signal and call the men up. If he does this promptly, it is not necessary for him to penalize other competitors who may have been drawn into a false start but he should penalize the offender who was in motion too soon. The Starter has entire jurisdiction over this matter and his decision is final.

19s-Al is in the "set" position with his fingers on the starting line. **Ruling:** This is an illegal position. The Starter may instruct all competitors to avoid touching the ground on or over the starting line but this should not be necessary if athletes are properly coached. There is no rule to prohibit the runner from leaning over the starting line so that head and shoulders are extended through the perpendicular plane of the starting line. The prohibition is against touching the ground on or over the line.

20s-Prior to a race, an assistant places starting blocks in proper position for Al. **Ruling:** The use of starting blocks for the feet is considered legal provided they are rigid and without springs or elastic material and provided their placement does not interfere with the prompt starting of the race. Blocks for the hands are not permissible.

21s-After the command to "get set" the Starter waits three or four seconds before firing the gun. **Ruling:** This is permissible but it is not considered good practice unless there is some doubt as to whether or not one of the competitors is in illegal motion. Two seconds is considered the proper pause between the "set" position and the firing of the gun. However, this is entirely under the jurisdiction of the Starter.

22s-After the command to "Get Set," Al rises from his position or he touches the ground on or in front of the starting line. **Ruling:** If this is his first offense he should be warned and charged with one false start. If this is followed by a similar offense, he must be disqualified unless the gun is fired. In that case, the runner should be called but no one should be charged with a false start. Several years ago, it was customary to assess a yardage penalty for certain false starts but the present rules do not provide for a yardage penalty under any circumstances.

23s-The starting runner in a relay race is disqualified for making two false starts. **Ruling:** The entire team must be disqualified. Wise coaches place a steady runner in the first position.

# Track and Field Facilities

BY PERCY BEARD

Coach of Track, University of Florida, Gainesville, Florida

I have often heard the statement that one of the reasons for the onslaught on our track and field records over the past 25 years was the great improvement in the tracks and other facilities, but I don't believe this is true. Either our techniques or our athletes, or both, have improved considerably more than the facilities upon which they perform.

During my own competitive and coaching career, I have not noticed any appreciable improvement in such facilities. Yet during the same period all of our standard track and field records have been broken two or more times. This does not prove that we have reached the ultimate in track and field construction.

We have many fine track stadia, judged by present day standards, but even the best and most carefully maintained may have periods of being too hard or too soft or too dry or too wet. During the course of a season a runner will probably meet all of these conditions; at any rate he cannot depend on having a good running surface each Saturday.

All of us have seen Championship meets where performances were under par because of a muddy track. No doubt our record books would have some different names except for such occurrences.

Even a firm, dry track may affect performances adversely. It seems reasonable to conclude that it takes energy for a runner to drive his spikes into a hard track—and energy to pull them out. Obviously such energy is not available to help propel the runner forward and the net result is to slow down his progress. The effect may be negligible in a hundred yard dash but reach measurable proportions in a two mile run.

A similar loss of energy occurs on a soft surface which is not firm enough to withstand the pressure exerted on it by the runner and gives way when he drives forward. This is especially true at the start of the sprints and hurdles. Even a firm, tough surface will get cut up and soft after a number of heats and the starters are correspondingly handicapped.

The ideal surface should meet all of these objections under any weather conditions and it is questionable if this can be done with the materials and methods in current use.

The same situation, only worse, prevails in the field events. A shot putter may, on successive Saturdays throw from a ring of grass, loose cinders, hard cinders, clay, sand or mud or any combination of these. Even the best surfaced ring soon becomes cut up from the competitors's spikes. In the finals of even a dual meet the boys stand in a hole at the back of the ring. Their first move upon stepping in the ring is to fill up the holes to give themselves better footing.

This condition is much worse in the discus throw. The back of the ring where they spin on the left foot is soon chewed up and full of holes. The boys move around the ring as far as they dare seeking better footing.

If the rings are soft or muddy, the competitors are severely handicapped, even though they might all be equally affected. This is not always true either. I recall a meet last year where the first flight of discus throwers completed their throws from a dry ring. It then started to rain and the second flight threw from a muddy ring.

The same general criticism can be made of pole vault and broad jump runways. In the pole vault all of the

vaulters leave the ground from approximately the same place. Even during the course of one meet this spot is likely to become worn to the point where it is measureably lower than it was at the start of the meet. This might be enough to cost a boy a record.

In these two events, boys work out and measure their approaches with great exactitude. Yet there have to be adjusted to meet the type of runway they have to use. If worked out for a fast, firm runway, considerable changes must be made for a soft or muddy runway. Many boys find it very difficult to make these changes under the stress of competition.

In the high jump, a firm take-off is particularly important. Even a very hard take-off becomes cut-up during the course of a meet with a large number of entries, especially at the spots from which the jumpers leave the ground. These spots become loose and worn to the point where they do not offer as good footing at the last of the meet, when critical heights are reached, as at the first.

The maintenance problem, on all of the facilities discussed, is considerable. In most cases the moisture content is a critical factor in attaining optimum conditions and this is difficult to control. For proper maintenance all should be worked over every day. Even so it is virtually impossible to maintain the best surface day after day.

One solution to these problems might be found through an organized research program. All of us have done some experimenting and no doubt significant discoveries have been made, but these scattered facts have not been collected and tied together. There may be some material, or combination of materials, which will provide a firm, durable, all weather surface, requiring a minimum of maintenance. Perhaps this Association will someday have enough funds to finance such a research project—either at a commercial laboratory or at one of the member institutions.

Another solution is suggested by our indoor meets. The nearest approach to the ideal track is the indoor board track upon which short spikes are used. It meets all of the requirements mentioned. It offers firm footing; it is durable in the sense that the starting area doesn't get so cut up during the course of a meet that it handicaps the runners; and it is always the same regardless of weather. There is no daily maintenance problem and it is always ready for practice or a meet.

Such a track could easily be set up on an outdoor quarter mile track. Its life under such conditions is questionable and the cost of replacing worn or rotted timber might be prohibitive.

To meet this objection a concrete track might be considered. It provides a permanent, all weather surface with no maintenance problems at all. Even the lanes, finish lines, hurdle marks, etc. could be permanently incorporated when constructed. Rubber soled shoes would be used and, if the concrete were properly finished, it would provide perfect footing—much better than those indoor wood tracks upon which spikes are not allowed.

One objection which will be raised is that such a surface would cause shin splints. This may or may not be true. There is a wide spread acceptance of the idea that running on a hard surface causes shin splints, but I wonder if this idea is not based more on traditional opinion

than scientific fact. For a number of years our cross-country course was all on paved roads and streets. Yet we never had a shin splint problem. Some boys had them and others didn't—just as they do on our track, which is quite soft.

Perhaps the rubber soled shoes which they wore provided enough resilience to prevent shin splints. If so, they would do the same for a concrete track.

Additional resilience could be provided by cementing down corrugated rubber matting over the entire concrete surface, although I do not believe this is necessary, except possibly for a few yards in front of the starting line to provide better footing for sprinters and hurdlers at that point.

It is possible that a synthetic rubber could be developed that could be applied as a liquid and harden upon exposure into a tough, durable coating. Repairs could be easily and quickly made with such a product.

The field events lend themselves very easily to concrete rings, runways, etc. All except the discus and javelin have been contested indoors for years, usually off of wood.

Several years ago, I built a concrete shot ring and a concrete discus ring. The circles were made of strap iron on edge  $1\frac{1}{2}$  wide and  $\frac{1}{4}$ " thick. These were imbedded in the concrete at the time it was poured. The toe board was an iron shell poured full of concrete and poured integrally with the slab. The concrete was finished with a wood trowel which left a rough surface. A steel trowel leaves the surface too smooth and slick.

We have used these rings in practice and for physical education classes and found them very satisfactory. They provide perfect footing when rubber soled shoes are used, both in the shot and discus—much better than wood.

The boys who have used them like them. Unfortunately they can't use them very much because they are so much better than the ones they will use in competition that they might get spoiled.

These rings place some extra burden on the officials in calling fouls since no mark is made by a competitor's shoe. This objection can be met by providing a groove filled with wet clay on the circle instead of an iron band.

For those who like to study footwork a light dusting of powdered chalk or lime will solve the problem.

I have not put in runways or a high jump take-off for lack of space but see not reason why they would not be satisfactory.

I believe a high jumper will get more height jumping from a concrete take-off than from clay or cinders. If

you drop a rubber ball on a concrete sidewalk and then on the average high jump take-off, it will bounce much higher from the concrete. It is my theory that a high jumper is much like a rubber ball—the harder and more unyielding the surface from which he jumps—the higher he will jump. In jumping from earth or cinders it seems to me that some of the force and drive exerted by the jumper is dissipated in driving the foot into the ground and the softer the surface the more spring is lost. If a concrete surface were paved with rubber, I question whether the jumper would benefit. Unless it were very thin and hard I believe it would hinder him.

The same reasoning might be applied to the broad jump take-off. An additional advantage is that there would be no danger of a jumper suffering a bruised heel as a result of jumping from a broad which was above the level of the runway—a condition frequently encountered especially on a muddy runway.

In lieu of the present broad jump board I would simply paint an 8" wide band of a contrasting color on the concrete and provide a soft clay filled groove at the scratch line as an aid to the judges in calling fouls.

In both the broad jump and pole vault the principal advantage of a concrete runway is the consistently good footing which would permit a jumper or vaulter to use the same measure approached at all times—unless wind velocity and direction forced an adjustment.

I have not suggested a concrete approach for the javelin because it would not be practical. It would, of course, ruin the infield for any other use. I do think it is practical to put down a portable wooden approach. I have seen javelin throwers perform under great difficulty during and after a rain when the turf was so slick that they were forced to throw virtually from a standing position.

The use of concrete is probably too fanciful to be seriously considered, but I do believe that the problem of providing ideal facilities is yet to be solved.

Unsolved too is the problem of standardizing what we have both from the standpoint of construction or composition and maintenance. There is too much variation in our track and field facilities.

The results of research and thought upon the part of track coaches might eventually result in specifications being incorporated in the rules—a possibility which should be seriously explored.



# A Report on High Hurdling

BY J. McADOO KEATON

Coach of Track, Southern Methodist University, Dallas, Texas

## MR. CHAIRMAN AND FELLOW COACHES:

I consider it an honor to be associated with you fellows here and to make a few remarks on this program. I am not here to give you anything new on hurdling, but merely to fill in on the program and to tell you a little about the manner in which hurdling is done at SMU.

The reason I am on this program is that the national meeting is being held in Dallas. Last fall I had a letter from Coach Frank Hill asking me to arrange for a high school coach to be on this program and also to obtain projectors for showing pictures. After I had complied with these requests, I had another letter from Coach Hill complimenting me on my quick response and asking that I appear on the program. I wrote to him suggesting that he get some coach who had had a little more success in track the past few years, but he replied that since the meeting was to be held in Dallas he felt that I should represent the local university.

To me, hurdling is one of the most interesting events on the track program. It certainly requires the speed of a sprinter and the endurance of the longer races, and the hurdler must have lots of courage and determination. What it takes to make a great hurdler or a great hurdle coach is to get a boy about 6 ft. 1 or 1½ in. tall who is agile and well co-ordinated and can do the 100 in about 9.6, with plenty of courage, self confidence, and the desire to be a great hurdler. Only a few boys with these qualities come along; when they do, they are the top hurdlers of the nation, regardless of the section of the country from which they come or who their coaches may be. Great hurdlers of the past have come from all sections of the country and have used various techniques in getting the job done. That is why it is hard for us to say just what is the best technique or form to be used.

I believe that each boy presents a new problem to his coach. When a boy comes to us and expresses a desire to become a hurdler, I think we should give him several days of conditioning work, being sure to include plenty of bending and stretching exercises, and then observe him long enough to find out how we can help him most. The boys we get at SMU are just average hurdlers, and they certainly need plenty of attention. Of the two boys who have done best in the hurdles for me since I have been at SMU, one came from the basketball team, and the other is a regular on the football team at the present time.

For a boy to do much good hurdling, he must be agile and co-ordinated, be able to relax, have average speed, be a good starter, and have plenty of courage and confidence, as well as the desire to excel as a hurdler. I think that we, as coaches, can help a boy to improve in developing each of these qualities. Along with conditioning work, be sure to include thirty minutes of bending and stretching exercises each day during the track season, and also work with the boy on his starts and his sprinting form.

In discussing the hurdling technique, it might be well to divide it into four parts: the start and approach; going

over the hurdle; the sprint between the hurdles; and the finish.

First, the start and approach: the hurdler uses the standard start used by the sprinters. Some boys do better with the bunch start and others with the medium.

The height and size of the boy will determine the kind of start best suited to him. The important thing is for him to be relaxed on the starting line, with the proper body lean, shoulders extending a little beyond the starting line and eyes on the ground rather than on the hurdles. He comes out of the holes using the vigorous arm drive of the sprinter being sure to keep the proper body lean, gradually increasing the length of his strides until he reaches his regular running stride. The position of the feet at the start will be determined by the lead foot for taking the hurdle: if the lead foot is the left one, then the right foot will be the forward foot at the start.

The first hurdle is the most important, so we hope to get the boy up to that hurdle at as near top speed as possible. On the eighth step, the boy lifts the lead leg up in a regular stepping position, the knee slightly flexed, reaching out with both hands, with a good body lean, and head up. I think that the two-handed approach is better, as the boy will be more relaxed in taking the hurdle and it will help to eliminate twisting and turning of the shoulders and body over the top of the hurdle. The hands should not be too high, but reaching forward, the hand opposite the lead foot almost touching the foot and the other arm slightly delayed.

Over the Hurdle: The hurdler covers approximately eleven feet going over the hurdle, taking off about seven feet in front and lands four feet past the hurdle. The trailing leg gives impetus for clearing the hurdle. When the trail leg leaves the ground, it is in one continuous motion, the knee starting toward the hurdle, the lower leg turned out, and the toe pulled up, so that the leg, as it crosses the top of the hurdle, is almost parallel with it. When the lead foot clears the hurdle, the leg is snapped down in a slightly flexed position. The body lean should be kept until the foot strikes the ground, the hurdler being sure not to hurry the arm opposite the lead foot. The arm should be brought down and back, not out to the side and back.

Between the hurdles, and the finish, If the hurdler has landed in a balanced position, with the body forward, the important first step will be correct. The body lean and the arm action between the hurdles should be those of a sprinter. The hurdler must have speed and drive between hurdles in order to be a winner. After the last hurdle has been cleared, the hurdler should put forth every ounce of sprinting ability that he possesses for the finish.

The amount and kind of work given the hurdler will be determined by the things he needs to improve on the most. Lots of time should be spent in working on one hurdle. This is where you have an opportunity of teaching hurdling technique. After he has mastered hurdling technique, then start working on more hurdles. The hurdler should spend lots of time working with the sprinters during the track season, and keep up the exercises (some gym work) during the fall and some work on the track.

I have touched on only a few minor things regarding hurdling, but I hope that I have perhaps said something which might be helpful.



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## Sprinting

BY JOHNNY GIBSON  
Seton Hall College

In my mind one of the most important points to be learned from watching the great sprinters that I have seen in action is relaxation. The sprinter who can't relax throughout his race is bound to run into trouble not so much from the competition as from himself. A great many fellows feel that the more they tense themselves and cramp their muscles that greater speed will develop.

However, the reverse is generally what happens. After the initial drive spends its force they invariably rock themselves back on their heels with their fighting motion. This is the prime reason why I always try to stress that the athlete must keep as relaxed as possible throughout his work-outs and by so doing he will acquire this important asset in running a competitive contest. I think

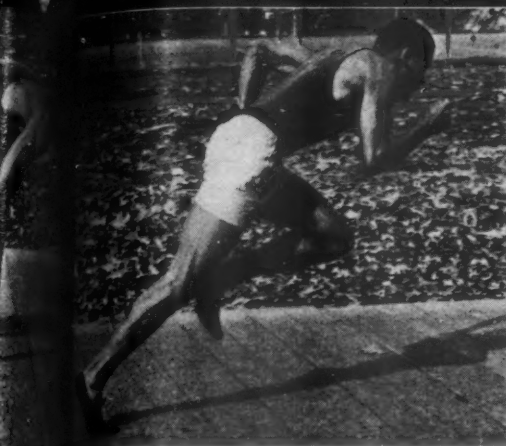
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that Andy Stanfield certainly proves this point even in his toughest races. He is at all times driving with a relaxed body and maintains it right through to the finish, a habit he has formed through his constant attention to this point in his workouts. This, in my opinion, is the first thing that a sprinter must learn and be thoroughly schooled in.

Once a sprinter learns the art of relaxation, he can then proceed to the other equally important points of the sport. To be a real top-notch sprinter a boy must possess the ability to lift his knees with a loose, powerful drive and at the same time get that added propulsion from the hip. Sprinters with a low knee action generally find themselves woefully lacking in the finishing drive when fatigue

is setting in. Low knee action generally is indicative of a very small crotch spread thereby limiting the stride which the athlete may take resulting in extra energy being used to make up the distance lost by this fault, especially in the drive for the finish. As can be seen from the accompanying pictures, Stanfield has developed this technique to the fullest and his ability to use this method to the utmost in the first half of his race has permitted him to build up so much speed and power that in the greater number of his races he has eased off considerably in the last fifteen to twenty yards of the race without any appreciable notice or loss of speed.

Contrary to a great many beliefs, I prefer to have my sprinters work out on the cross-country course during

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the fall months, five days a week running from two to three miles a day although I must admit that I do not place any particular emphasis on the time that the distance must be covered in. The main idea I have in this respect is to get their legs used to being used and even though they comparatively walk the distance they nevertheless get in that all important continual leg action. This is accompanied by varied forms of exercises designed to loosen the hips, leg drive, knee pick-up and various stretching and tension of the muscles. When this has been done I feel that the athlete is then in a position to get down to the more serious part of the program.

Starting, perhaps, is the most discussed point in the art of sprinting. A great many coaches and athletes feel that the race is won or lost in the start. While this may be true in the shorter races held on the indoor tracks, a boy must be able to maintain his speed fairly well throughout even the shortest distances to capitalize on his starting ability. Here again, though, there is quite a divergence of opinion on the proper start for a fellow to use. There are any number of variances of the crouch start and I have watched them for years with the final result being that I am thoroughly convinced that the long start is the fastest and best for any sprinter or middle distance runner.

One thing that perhaps works to the disadvantage of a starter more than anything else is the entering of the holes or blocks from the rear. Such procedure has the tendency to place the competitor on his heels to start with and limits the amount of forward propulsion that he can get from the crouch start. By placing his front foot first, from a position standing directly in front of the starting line, he can place his hands on the ground while putting his rear leg in position. The main propulsion in this form of start is forward without a doubt and no strain is placed on any portion of the foot or leg such as is experienced when entering from the rear.

The hands should be placed so that a normal spread measured by the fall of the shoulders exists. They would normally be just outside the legs thereby giving a more compact and relaxed stance to the starter. At the command get set the body moves forward until the shoulders are slightly in front of the hands. Care should be exercised to see that the shoulders do not extend too far in front of the hands or an unnatural tension will result and should the starter hold the athlete would be forced to break. It is almost impossible to hold under these cir-

cumstances without losing the benefit of a good driving start. At the same time that the shoulders move forward, the buttocks are lifted upward but not to the extent that the rear leg is stiff. A slight bend should be kept in the rear leg so that it will not have to be bent again to bring it into action. On the other hand, if the leg is not raised enough in the rear, it will adversely affect the start as the proper driving tension cannot be placed on it under those circumstances.

I do not like to work sprinters at running distances because I feel that in doing so you have a tendency to impress upon them that they must drive and they seem to develop a mental attitude that limits them from keeping loose. Also, there is another point which must be taken into consideration in this sort of a program and that is the mental one. Most sprinters are nervous and worrisome which is quite detrimental if carried too far. Such actions on the part of a competitor can lose a race before it is started. On the other hand some of it is good but it must be controlled and by keeping them away from their running distances it helps to keep them on an even keel.

Over and under distance work-outs are usual procedure and rarely do we work either one two days in a row. If we do over-work one day then it is under distance the next but in all cases we try to make it a practice that starting is practiced every day and this is generally done at the conclusion of the work-out rather than at the start. The reason? Well, after a work-out the muscles are generally in better shape for the quick action and it is rare that the schedule will be such that they cannot stand this work at the close of the session.

I try to stress four points on my sprinters and keep them constantly before their mind. These points are — 1; As loose as you can, 2; as fast as you can, 3; as far as you can, 4; as relaxed as you can. With these commands incessantly pouring into their minds they cannot help but try to make these points become so mechanical that they do them without thinking.

Throughout his high school career Stanfield ran everything from the sprints up to the mile run and was 440 and 880 yard champion at Lincoln High School in Jersey City, N.J. Upon his return from service in Japan with the Army he continued to run the 440 at which distance he has turned in some commendable performances. After watching him in practice one day, while working with the sprinters, I decided to bring him down to the sprints and he has followed a program as outlined above ever since.

Pictures of Stanfield, courtesy SCHOLASTIC COACH

# Pole Vaulting A to Z

BY RICHARD V. GANSLEN

Supervisor of the Physical Fitness Research Laboratory U. of Illinois, Champaign

The way to achieve lasting fame as a coach is, first you have got to get a good boy!

Since Guts Muths first used pole vaulting as a competitive event in 1795, vaulting has made steady progress. At this writing nearly a hundred men have vaulted 14 feet with four of these over 15 feet. 14 foot vaulting, although still a top notch performance, has already been achieved in Japan, Russia, Sweden, Finland, Switzerland and France.

Pole vaulters have been of all sizes and shapes; Osolin of Russia is only 5'6" yet, he has cleared 14.1½. Sefton and Padway were over 6'3" and weighed over 185 lbs. Ohe, Nishida, and Morcom ranged from 5'9" to 6'1" and none of them weighed in excess of 145 lbs.

There appears to be a general trend in the direction of taller lighter men in the vault. Many tall thin men, whom coaches at one time would have thought incapable of vaulting well, have achieved great distinction. This change in viewpoint stems from two principal factors, (1) tall, thin wiry individuals may have a very high strength per pound of body weight ratio, (2) there are distinct advantages in reach for a taller man in the bar clearance as well as the handgrip location at the take-off. It is equally important to recognize, that a lighter man needs to develop less absolute force to catapult his lighter body into the air. Modernization of the vaulting techniques has been a boon to lightly built fast men.

According to the revised Finnish Decathlon scoring table, a 14.6" vault is equivalent to: a 46.5 quarter, 3:46-1500 meters, 14 flat in the high hurdles, a 26'5" broad jump, 170 feet with the discus and 244 feet with the javelin.

It was once the thing to blame the superiority of west coast vaulters on the weather, but since this superiority no longer exists, it is quite obvious that this was not the chief factor. The coaching of the pole vault on the west coast at the high school level has always been better than in the rest of the country as a whole, but despite this, there has been a multitude of great high school jumpers who never achieved national fame at the college level of competition.

## Equipment and Facilities

The vaulting pole, regardless of the material from which it is made, must be flexible enough to let the vaulter's body swing past it in a straight ahead line without lateral deflection of the body to any extent. At the same time, the pole must rebound quickly to its original shape and, not act so as to absorb the pull-up force to an appreciable extent. Any pole can be balanced by adding heavy fishing sinkers to the upper end. Bamboo House will still supply poles for as little as \$5.00 each, while the present fabricated poles, range from \$35-50.

I feel that many coaches handicap their vaulters by not giving them soft enough landing pits. We build up our pit 3-4 feet above ground level with shavings. An athlete who is subconsciously thinking about being injured, is not going to experiment with his form in order to improve.

## Speed

The speed of the run and its length is of little significance up to heights of 13 ft. 6 inches.

While doing his Masters Thesis, Warmerdam was un-

able to discriminate between good and poor vaulters upon the basis of speed at moderate heights.

As the height of the bar increase, added speed in the run, provided the vault timing itself is correct, provides additional energy for the swing and pull-up and, permits a higher grip on the pole.

The length of the run is of no particular importance. Many top notch jumpers have used less than a 100 foot approach, others use as much as 150 feet. The critical factor is, how fast can a given man accelerate smoothly. Lighter men can usually use a shorter approach.

The accuracy of the run, is something which cannot be left to chance. It is preferable, particularly with average vaulters, to use a starting point on the runway on which they stand with both feet. Inexperienced men using a "drifting" approach, invariably drift in faster as the competition gets tighter thus, they hit their first mark correctly and over-stride the rest of the way to takeoff. A static starting point limits, to a large extent, variations in the stride length and early approach speed. It is usually most effective to have the vaulter obtain his marks by starting at the take-off point and running back up the runway. Use several checkers during this procedure. This should be repeated over the span of a week if satisfactory results are to be expected. It is advisable to have final check mark some 6-8 strides from the box, another some 90-100 feet out, with a starting point anywhere from 100-150 feet. Top vaulters rarely have to look at their final check mark. **Do not permit** vaulters to use a marker for the take-off foot at the box if it is avoidable. The athlete must learn to run correctly without this additional check. Striding low hurdles daily is one exercise which will help to develop a consistent stride.

Top speed must be achieved at least three or four strides from the take-off, only then can the athlete relax and settle for the pole plant and take-off spring.

## The Pole Plant

Many potentially great vaulters are handicapped by a jerky pole plant. The difference between Don Cooper's 14'4" and 15 foot vaults last year, was a smoother pole plant.

The vaulter should practice pole sliding not less than 30-40 times per day, using a smooth under-hand scooping motion, in which the upper hand does not pass below the hip. The pole must be pushed out in front of the vaulter so that it strikes the back of the box as the hands are shifted, before the athlete runs in under the pole. The left hand slide is completed and the shoulders are squared away to the pit before the vaulter has completed his last stride. Many vaulters start the plant too late, the third stride before a take-off is the usual time, with slight variations permissible.

## A Fundamental Concept

The pole has, at the outset of the vault, no velocity whatsoever. All the velocity that the pole develops it must get from the arm thrust and the swing, after which, any changes in the velocity of the vaulter's body or the pole are mutually interdependent functions.

At the take-off the vaulter's arms are not fully extended, but flexed 90-100 degrees, this helps the vaulter project his body onto the pole and helps to get the pole



going. The shock of the pole plant is also absorbed during this action.

#### The Vault Proper

The take-off is accomplished by a vigorous foot stamp and a hard forward-upward thrust of the lead leg which is led by the knee and not the foot. The back should not be permitted to arch appreciably in the take-off, the knee thrust helps to pull the hips forward quickly.

The forward swing should not continue longer than necessary to bring the vaulter's hips in line with his pole, at which time, his hips and knees should both be bent to about 90 degrees. The purpose of this preliminary swing is, to give the pole momentum.

At this moment, (actually about .24 second after the take-off) the athlete should roll backward on his pole around his hands, look upward and pull his knees in toward his chest, this is to bring his center of body weight over the base of the pole. Any further movements which

the vaulter makes should be made with the body weight gathered around the pole as much as possible, it helps to keep the pole going. As soon as the back is parallel to the ground the pull and turn should be initiated with one vigorous effort accompanied, by a hard upward thrust of the lead leg as vertically along the long axis of the pole as possible. The athlete should not try to go toward the bar at this time. The kick must be a vigorous effort in coordination with the pull and turn. If this last mentioned movement is properly blended with the swing, the vaulter will fly up over the bar, with little or no noticeable effort in the sense of pushing up. In actual practice, the vaulter should try to catapult himself upward.

In our work we try to have the vaulter turn so fast, that he leaves the pole with his right side to the bar, this, is usually preceded by a slight arch followed by a fly-away. From a kinesiological viewpoint, a vaulter can probably react faster from this position in clearing his trailing arm. We do not teach a push-up at all, it is a



natural consequence of properly blended movements of prior existence and requires little effort, but great speed.

Neither Laz nor Coleman, 15.1 % and 14.4 ever reached 12.6 in high school. Of our two 13.8 jumpers in the last couple of years, one cleared 13 feet once in high school. Our work is primarily on fundamentals at low heights, rarely above 13.6 in practice. Our vaulters try to preserve their arm "snap" by not vaulting for at least two days before a meet, Laz did not practice vault 6 times during the whole season from January to June. We do not favor much heavy arm work, light curling exercises with the weights (about 60 lbs.), minimum of rope climbing, moderate chinning, push-ups, lots of calisthenics and thigh flexor conditioning, and lots of fooling around on the track; by this I mean, the vaulters play around with the sprints, low hurdles and high and broad jumps without any definite plan of action.

#### **Common Faults, Origin, Correction**

Too fast in the approach, sacrifice of speed for control. Failure to thrust pole forward in front at the box and completing the shift late. This results in premature arm extension and does not permit the vaulter to spring.

Failure to shift hands completely. Must be practiced with dry runs 40-50 times per day on the infield.

Off balance take-off. If vaulter overshifts, he will land in left side of pit, failure to shift the weight over the take-off foot will result in flight toward right standard in mid-air. Check for hand shifting technique and watch for wavering in the run at the box.

Vaulter fails to spring. May be just a bad habit and he must make a conscious effort.

Leads swing with foot rather than knee, long fast swing and he won't be able to pull up. Pole comes to the bar too fast. Exaggerate knee up action.

Vaulter does not roll back on his pole far enough and soon enough. Usually hits bar while rising. Ask the vaulter to throw his head back as soon as he leaves the ground and look up.

Premature turn, before the foot elevation has de-

veloped. Most common fault in champion jumpers trying to achieve peak heights. Due principally to over-anxiety. Does not let the vault develop sufficiently. Fails to realize that he has more time to work at peak points.

Throws feet out in turn instead of pulling them in and kicking up. Apply more roll-back on the pole.

Floats or swings lead leg up over the bar rather than punching it. Drags during flight across and hips do not get much elevation.

Arches too soon and too much over the bar. Anxious to clear. Should do this while still going up away from the pole, should not try to push way over the bar, but should catapult himself up.

Fails to finish vault. A psychological problem which may actually stem from over-confidence. A vault is complete when you are sitting in the pit and the bar is still up there.

Use of too stiff a pole and the swing is deflected laterally.

Warms up legs, but forgets that his arms will be required to do the major portion of the work the fastest.

Holds too high. A good vaulter can clear 14 steadily with a 12 foot grip, 12.8 on the pole with the top of the right hand. Should always work on mechanics. The basic principles are the same regardless of the height. To hold very high, 13.4-7" such as Laz and Richards you need either a long swing or a fast approach. Laz's swing is so long, that he rarely clears even at 15 feet with the standards less than a foot out toward the pit away from the box. He did not learn this over-night.

The chief value of a coach to a boy lies not in his technical know-how, but how good a **motivator** are you? Getting men to try the impossible is a psychological conditioning process, not physiological.

Don't underestimate the intelligence of a boy in teaching him the mechanics of a skill. Don't just tell him how, tell him why!

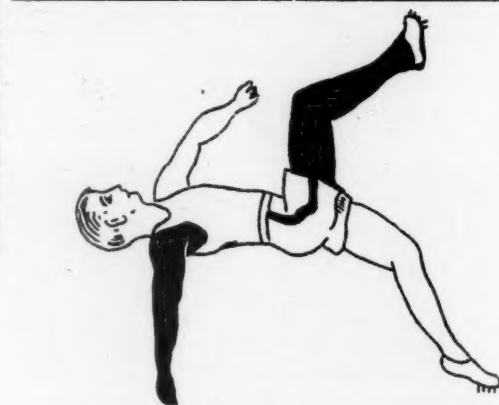
# THE MECHANICS OF HOP, STEP AND JUMP

TAJIMA WORLD RECORD JUMP TAKEN FROM FILMS



Low angle of take-off

1.



2.

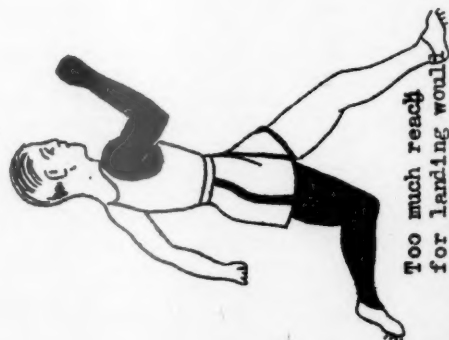


3.



Do not let body fall back too far

4.

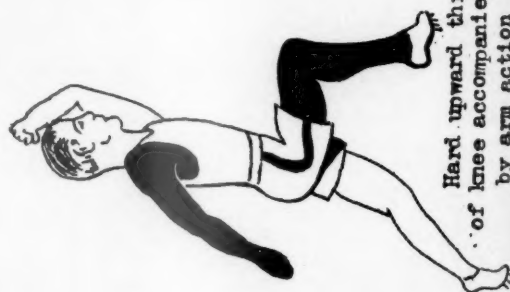


Too much reach for landing would be bad here

5.



6.



Hard upward thrust of knee accompanied by arm action

7.



Hold knee aloft Do not reach for ground

8.

Riding the hop



9.

Note the use of the arms



10.

Bring trailing leg thru as fast as possible.



11.

Take-off same as in broad jump



12.



13.



14.



15.

*Richard W. Henshaw*



# The Mechanics of the Running Hop, Step and Jump

BY RICHARD V. GANSLEN

The running hop, step and jump dates from earliest Greek times. The Ancient Greeks were credited with jumps in excess of "60 cubits", but since the metric equivalent of a "cubit" has never been ascertained, we do not really know how good the Greeks were.

The record of American jumpers in this event has been little short of disgraceful. No American has ever reached 51 feet and probably not more than 25 men have ever seen 48 feet. A consistent 46 footer can be assured of a place in national competition any time, while a 47 footer can guarantee himself a national title.

The statements contained herein despite their superficial simplicity, is a synthesis of ten years of investigation on this event. The original detailed mechanical analysis was made from high speed films at Springfield College in 1939, but was later supported by additional films made at the 1947 National AAU meet. The foreign literature, all that could be found, has been carefully surveyed. None of the foreign papers are of a scientific nature. Discussions with the Japanese coaches during a track tour in 1937 actually were supported, in part at least, by subsequent scientific analysis.

This is not an article on the theory of the event, but a condensation of facts gleaned from many sources and presented in simplified style. The writer, although never specializing in this skill, has had some success along this line.

There are no new theories of hop, step jumping worthy of consideration. Track skills, such as the hop, step and jump, must be carried out according to established laws of physics and mechanics if they are to be efficient. Variations in the structural characteristics of individuals may necessitate slight modifications in technique within the skill itself, but this does not change the basic principles.

Any 23 foot broad jumper, with a fair sense of rhythm, some speed and fair mechanical form, can easily reach 48 feet in this event. In the original paper back in 1939, the writer predicted a World Record of 54 feet in this event, this is well within the realm of possibility.

The ideal hop, step and jumper is tall, fast, light; in addition to which, he should have a strong back and legs.

## A Fundamental Concept

The impact force with which the jumper lands at the end of the hop, step or jump, depends on three factors; his body weight, his landing speed, and the angle with which his weight comes into contact with the ground. These above then, are the key elements upon which all hop, step and jumping must be based. To obtain the maximum efficiency from the working leg, the balance of the jumper must be maintained by proper use of the arms.

## The Run and Take-off

The length of the run is of no particular significance, but speed is always desirable. The "character" of the run is of greatest importance. By this I mean, the manner of running. The take-off in the hop, step must be approached in a much more relaxed manner, a sort of "free running" style that one approximates in the low hurdles.

The relaxation is much more pronounced here as compared with the broad jump because, the take-off is a carefully controlled effort both as to angle of projection and as to force expenditure. The take-off is not a max-

imal effort as it is in the broad jump. At the board there is a definite settling for the take-off without the throwing back of the head and the vertical lift of the broad jump.

It was found during the film analysis, that the speed carried into the step from the hop, had a direct quantitative relation with the angle of take-off in the hop; (i.e.) The greater the angle of take-off in the hop, the slower the takeoff for the step. Why? Simply because the force with which the man strikes the ground increases as his height above the ground increases for any given take-off velocity. A man's body descends at the same angle he takes off irrespective of any arm waving etc. In other words, the take-off velocity is wasted in up and down travel. In the landing, the additional impact force, which is a direct function of the impact angle, must be absorbed by the landing leg. This impact force can well exceed 2000 ft/lbs.

The purpose of the hop is not to expend as much energy as possible but to get good distance and conserve momentum. The implication for all jumpers is obvious. The take-off for the hop and step must be made at as low an angle as possible, commensurate with the take-off velocity, to clear some set minimal distance. The jumper must set up some definite goal for his hop which he must reach with a low take-off angle and a high take-off force. The run speed is not necessarily the determiner of this take-off force since, it was found in this study, as well as in vaulting, that the take-off velocity in good jumpers, due to a vigorous foot stamp coordinated with the arm action, is often higher than the run speed.

During the hop flight, the jumper should keep his arms swinging freely in order to maintain balance. Under no circumstances should the jumper lean back during the hop or step flight. The more forward the body is carried above the hips the easier it is to stay low.

The use of the term "step" is a misnomer. The event is really a hop-jump-jump. Any hop, step and jumper who settles for a step of less than 12 feet, can be assured of an uneventful future.

Essential to a long step, is a high lift of the lead knee the jumper should coordinate the high knee lift with his arm action. Hold the knee up while "riding out" the step. The step should never be quick, but rather a floating feeling should be aimed at, just a little shorter than the hop itself. The jumper must set a marker at least 12-14 feet from his hop landing and stretch to reach this. In practice, it is best to keep the hop low and relatively short, 15-16 feet, with the step comparatively long and slightly higher than was the hop. In practicing with the standing hop, step and jump from a one foot stand, the spacing of the jumps will be reversed and approximate a 6-9-11 proportionality. In an indoor exhibition some years ago, the writer reached 7-11-12 in this manner, one foot short of the World Indoor Record. Standing hop, step and jump practice is excellent to develop rhythm and for learning to stretch the step.

Training in the hop, step and jump should always be done with markers, preferably white cardboard or bandage material.

In the hop landing, contrary to the maintenance of a marked body lean so essential in the hop and step, the jumper should straighten up, so that the final take-off is

the same as in the broad jump. Discussion of the final jump is superfluous.

#### Summary

In conclusion then; a low hop, but as high as necessary to achieve a goal commensurate with the capacities of the jumper. The hop length should probably never be less than 18 feet nor more than 20 feet, since to achieve 20 feet, most men are forced to jump too high (in the absence of great speed). Balance at the take-off is essential, with the body weight directly over the take-off foot and in the landing as well. Balance in the air depends on the proper use of the arms, preferably carried high, (as if one were running down a narrow alley of two picket fences built up to waist height on either side). Elbows away from the body.

The step is no step, if the hop landing is comfortable, the jumper should still have plenty of forward speed left. Spring vigorously and jump the step, drive the lead knee high, hold the lead leg up and ride the step out. Keep the body canted forward in the hop and step and do not reach forward with the foot and straighten up, otherwise, your angle of impact will be altered.

#### Training Hints

Hopping exercises on both legs is of course essential. Plenty of sprint and low hurdle work. Lots of high jumping from either leg. Use the strongest leg for the hop effort.

To develop the hop and step technique try the following:

Set a low hurdle about 6-7 feet into the broad jump pit past the board. Use a run of 40-50 feet, and hop over this hurdle for about 15-16 feet. The pit will absorb the

shock. For the step, take a hurdle stride of 12-14 feet over the hurdle, but hold the lead leg and knee up and ride it out. Keep the take-off low. Exaggerate the knee lift in the step always. Sometimes come into the hurdle from a short hop to a step in combination. Practice the standing hop, step and jump 20-30 times per day. When possible practice on the grass to help perfect your balance and rhythm.

In competition on slippery surfaces always use a heel spike type of shoe. Heal cushions are always necessary. Do not jump often for distance. Try to develop a dah-dah dah rhythm, rather than the typical American dat-dit-dah rhythm.

In competition get as much distance as you can on the hop and step, 32-34 feet and let the rest of the jump take care of itself. If you have 18 and 14 here, you only need a 16 foot final jump for 48 feet, this will put you on the Olympic Team.

Below is a table which shows how some jumpers space their jumps:

Jumper, Country	Hop feet inches	Step feet inches	Jump feet inches	Total feet inches
Tajima, Japan	20 4	13 1½	19	52 5½
Nambu, Japan	21	14 6	16 2	51 7
Togami, Japan	19	14	19 2	52 2
Oda, Japan	22 4	11 6	18 1	51 11
Brown, U.S.A.	18 6	12 20	5½	50 11½
Romero, U.S.A.	20	15	15 4¾	50 4¾
Metcalf, Australia	18 6	13 6	20 4	51 11
Wollner, Germany	19	14 6	16 3	50 21½
Aherne, U.S.A.	20	11 3	19 1½	50 11
Brimetto, Argentina	20 4	15 7	14 9	50 8½
Aksel Bjerrgaard, Danish, Coach's Recommendation	21	14 9	16 3	52
Ganslen, U.S.A.	19 6	13 1	16 1¾	48 8¾

## The Broad Jump

BY JESS MORTENSON  
University of Southern California

This short discussion on the broad jump will be divided into three parts; the run, the take off and the landing. The length of the run varies with different boys because of their abilities to attain maximum speed. Here at USC we use a check mark at about 90 feet and another check mark about 40 feet from the board. I feel that it is important to use the 40 foot check mark to insure a fair jump on every effort. These check marks will vary from time to time during the season and will be different on each runway used. It is very important from a psychological as well as a physical standpoint for the checks to be right. A runner can never do his best until he is certain in his own mind that his marks are so located as to bring him to the board in perfect step. When he gets a feeling of confidence in his step he can concentrate on developing full speed in the run and on the spring from the board.

The uniform running necessary to hit the check marks consistently is difficult to develop at first but striding over low hurdles will correct uneven steps. By running a series of three or four low hurdles repeatedly he will not only develop an even stride but will also develop spring and endurance which is necessary in all meets.

We like to use a run of about 120 feet so that when the jumper hits the first check mark he has some speed and has an even running stride. He should attain top speed at least four strides before reaching the board so that he can gather for the final spring. These last three

strides are not let up strides but a period of relaxing so that the muscles are limber and pliable for a full effort spring.

When the jumper reaches the board, the head and chest should be held up so that his body will be directly over his take-off foot when he drives himself into the air.

On leaving the board the jumper must combine height with his momentum and spring. Consequently he must have no forward lean since such an angle would prevent him from lifting his body very high into the air. Also there must be no backward lean since this would make him lose much of his momentum of the run.

The jumper aims for a pronounced upward drive at the moment of leaping. The foot comes down firmly on the board concentrating on speed and lift. It is not wise to accentuate a stamp on the board since it may cause the jumper to lose sight of the two main points which are speed and lift.

At the jump, presuming that the athlete takes off with his left foot, the right legs goes up and forward as though continuing the run. The arms will naturally reach out and forward at the top of the jump.

The torso goes through the air almost in an erect position although there is a slight forward lean.

After the take-off some jumpers use running strides in the air. The principal aid of this motion is in maintaining balance. It may also help him to keep his feet

in the air the longest possible time and thus get the maximum distance.

It is very important to stress attaining the most possible amount of height and the jumper will find the distance will take care of itself.

I will make no effort to say which style of jumping is better since we all can name excellent jumpers who use each style. The hitch kick, the hip swing or the float.

The generally accepted method of landing is to bend the knees and fall forward. There is still enough momentum left after a jump at high speed to drive the body over the feet in the landing pit.

If a side swing of the body is made upon arriving in the pit, it is usually done by driving hard upon the jumping foot when landing, forcing the body to be swung away from that leg.

To avoid losing distance on landing by having the hands or buttocks break the dirt behind the feet, the jumper should spend much time on practice landings. This should be done with a half speed run and landing in shavings such as the high jump pit.

Pre-season training should include exercises to build up the stomach muscles and spring in the legs. Golf, hiking, volleyball, tennis and handball are good games to take part in to build up the legs prior to the regular

training period. He should work out on the track twice or three times a week during the fall doing some jogging, short sprints and bounding exercises.

From six to eight weeks before the first competition the broad jumper should have a regular training program, giving special attention to work on form during the first half of this period.

Jumping for form should be combined with starts and other dash work with the sprinters.

After the competitive season starts he should confine his jumping to work on form except possibly a few jumps on Tuesday.

He should continue to run low hurdles throughout the season since they are a good conditioner and will help maintain an even stride. The hurdles should be placed at intervals where he can reach them with his regular running stride.

There has been some discussion on the advisability of using an 18" take-off board in the broad jump. I personally feel it might work out to good advantage. With the board now in use we get some heel bruises when the dirt in front of the board gets soft or below the level of the board the heel comes in contact with the sharp back edge of the board. Furthermore it would always give the jumper a board take-off when his step is a little short.

## Problem of the "Stitch" or "Side-ache"

BY CHARLES D. WERNER

Penn State College

An inquiry into the problem of the "stitch or side ache", I might say that to my knowledge there has been no definite research and, hence, no definite answer to the problem.

Over the years, I have noticed many points relative to the ailment both as to probable cause and to methods of relief. I will list these bits of knowledge, gained by experience, for what good you may get out of them.

(1) The stitch is most common with beginner runners and early in the season runners. It tends to become less frequent with added condition.

(2) It can become chronic to the point of attacking at a given place on the course. I once had a lad who noticed that he got it near a certain tree—about 2½ miles from the start. I tried having him start closer and farther and even run the course in reverse direction and still he always got it near this tree. I pointed out the fact to him that he was victim of a mental hazard—even suggested chopping down the tree—but nothing helped. He gradually noticed a decline in the intensity and frequency near the end of the season and the following year had no trouble at all.

While coaching at the University of Illinois long ago, I worked with Dr. Coleman Griffith, eminent psychologist, on this problem. He concluded that it was largely mental and had fairly good results with pills. He started with giving the lad a charcoal tablet and a lot of talk about it being a great gas absorbent and how it would definitely end the trouble. This worked out so well that he followed it by changing from charcoal to chalk tablets—black, of course—and non-gas absorbent; same results. It was interesting to learn that unless the victim had his pill daily and at a measured time, prior to the workout, he got a severe stitch. So Dr. Griffith and yours truly dropped

the whole ridiculous study and just let nature take care of it.

I have noticed that on a squad of 35—if no one man complains—no one complains. If a milk-toast athlete complains of a stitch, no one pays any attention to him, it's then 34 to 1. If a strong leader type is attacked, look out! You may wind up with 35 chronic stitch runners. It becomes a most convenient alibi. Nobody can see it or deny it, etc.

(3) I have always felt that good conditioning took in a lot, so that our cross-country lads do much besides running; such as; **abdominal exercises** to acquire a wash-board stomach; **twisting exercises** to loosen up and limber up the sides and back; **belly breathing exercises** to condition the diaphragm; **chest breathing exercises** of to expand the space for air and to make for greater vital capacity.

The normal runner breathes both as a chest breather and a belly breather, as well as through both the mouth and the nose.

At one stage, in my search for the answer, I was convinced that the stitch was due to a soreness or tightening up of the diaphragm muscle. It seemed so logical to believe that this muscle would go through a conditioning similar to the leg muscles and, since it was, in most cases, unaccustomed to the more active and prolonged contractions and relaxations; it now and then tightened up (got a spasm or cramp). I was encouraged in my belief that this was the answer when I studied the area of soreness or pain of the stitch. It seemed that it followed the line of attachment of the diaphragm muscle to the body (sternum around to vertebrae); in fact, several runners noticed that the pain traveled and always on the line of attachment.

I tried a tight, wide belly band on the lads in an



effort to diminish belly breathing and, thereby, relieve the activity of the diaphragm muscle. Results were so-so; some good, some not good; so I dropped this theory. We still do the exercises though and have fewer stitches.

(4) We always have the lads who are sure it is diet or beverage. I take no stock in this. The meal of 3½ to 4 hours ago has gone beyond where it could cause the stitch. In such cases, to play ball with the boy and help him psychologically, I advise the diet and beverage that he wants. I must cleverly get this from him and then give it back to him.

Such a procedure nearly always results favorably. I try to tell the boy to keep this secret between him and me as it is surely a prescription for him only. Back in my mind, I am trying to avoid a squad who can't eat eggs, meat, potatoes, drink milk, etc.

(5) Most recent of my brainstormes along the stitch lines is this: when the victim complains, tell him that the next time he is hit with a stitch to stop and completely expel all of the air out of his lungs. (When he thinks he can't get any more out, try further and further and furthr. Get it all out, then start all over).

I got this idea from the thought that perhaps the stitch could be the result of some interruption in the rhythm of breathing, wherein, as expulsion was in process, it suddenly was checked and intake breathing took over.

My thinking or reasoning, at this point, seems sound, but what relation this could have to the stitch, I could not figure out. The interruption could be from any number of things; speech, surprise, cough, belch or perhaps, even a change of thought.

Well, I had to make up a gag to complete the brainstorm, so I always told the lad that when the rhythmic in and out was interrupted, sometimes it left a small pocket of carbon dioxide in the lungs which had not gotten out and until it was forced out, the stitch resulted.

Even though I hang my head in shame at such a fantastical tale, the results were always good enough to merit repeating it to others.

Now there you have it. That is about the extent of my experience with the stitch. It is a factual malady which most every human has experienced, commonly called the "side ache". I have tried everything. At one time or another, everything or anything worked; also, of course, sometimes, as in your case, nothing works.

I feel that it could be due to any one of these items, but the diaphragm theory in item (3) and the mental hazard in item (2) seem to stand out with me. Over the years I have, many times, been certain that I knew the cause and remedy; only to change my mind later.

Hope this helps and I will be interested hearing further about your procedures and results.

## Mal Whitfield — Middle Distance Expert

LARRY SNYDER

Ohio State

The only one who can tell you authentically what makes Mal Whitfield click in the middle distance runs is Mal himself. In his absence I will try to give you my impressions of him with a bit of history added.

Whitfield came to Ohio State via Lockbourne Air Base, a suburb of Columbus. He had run 1:55 at Jefferson High School in Los Angeles, then entered the Air Corps. In the spring of 1946 he was granted permission by his commanding officer to enroll in the University as a full time student. Since that time he has had three years of college competition, has engaged in some thirty missions over Korea, has become Olympic champion at 800 meters, and is the co-holder of the world mark for 880 yards. He has travelled more than 100,000 miles to compete all over the civilized world. I am sure that he has more trophies of the race than any other track man. He is now a staff sergeant.

When he reported for track at the Ohio Stadium, he was 6' 1½" tall, beautifully muscled, and with a long swinging stride which he was able to accelerate to sprint speed. Mal appeared to possess everything that a great champion should have in his make-up. He was a willing worker, but a lone wolf. He preferred to take his workouts by himself, even to the initial warm-up. We had Bill Clifford as a team mate for Mal, but that did not interest him. Bill, you may recall won the NCAA 880 in 1:50:8 at Salt Lake City in a thrilling finish with Dianetti. That spring, 1947, Mal was in California training with his air squadron.

Mal's idea of a warm-up consisted of from one to four miles of easy jogging, striding, jogging, and more and more striding, intermingled with a half dozen bursts of nearly top speed. After that he was ready to remove his rubber shoes, don his spikes and start running. He may have done some calisthenics during that time, but they must have

been done while he circled the track, always in the outside lane.

Mal will have to tell you whether he knows pace or not. I always thought he kidded us a bit with his seeming lack of ability to judge his lap speed. On one occasion several years later, he strode a 48 second quarter while attempting to hit 53 seconds. Perhaps he, like all boys, like to make the spectators' eyes pop out with "believe it or not" performances.

After the warm-up I doubt that Mal's daily workouts varied much from those of the other great half milers. He ran a lot of 220's, repeating with only the walk back to the start as a rest period; four, five, six of those with the last two very fast. Another night in place of the 220's there would be four or five in-and-outers, striding quarters, 52-56 seconds, with a slow jogging quarter interspersed; or instead of those in-and-outers, six to eight laps of wind sprints, with the sprints 110 yards being very fast.

Pace laps, of course, were also a part of any of the above workouts. The nights when trials were held a portion of the regular workout would be eliminated. Three hundreds and three thirties always were run in pairs. If a fast quarter was on tap it might be preceded or followed by a 330. Six-sixty and three quarters were usually tough enough workouts so one of them would constitute the only trial that night.

Six-sixty was usually the top distance trial for Mal. We learned that he, for one reason or another, would not put out enough energy in a longer trial to make it worth while. Both Charlie Beetham and I used every argument and wile to get him to run longer and fast, but he never did. Only now and then were the 660's all out. That convinces me that no matter how much Mal talks of running the

1500 meters, he never will. He likes the quick, speedy workouts and races, not the grinding ones. Just how much endurance he has, we never could discover exactly. He has never participated in cross country, and to my knowledge, has only run one mile race. He finished second in a 4:30 mile in 1946. I have never seen him do what I thought was his best in any time trial over 660 yards.

Like every champion Whitfield loves to run. On days that he could not get to the Stadium, he would work out on the air strip at Lockbourne running with rubber shoes on the concrete runways. The hard surface did his legs no apparent damage. He never has had anything wrong with his feet or legs, no pulls, no arch trouble. He ran in all seasons on the bad days as well as the good ones. He is the perfect example of the "natural" who works twice as hard as the average boy to earn the right to be called a "natural".

While running as a freshman, Mal learned the hard way the "maneuver" which was later to win the Olympic championship for him. Herb Barten of Michigan (4th in the Olympic 800 m.) would follow the smoothly striding Whitfield then jump him with such speed at the quarter, or any place up to 660 yards, that Mal would tighten up so much that Herb could stride on in to an easy victory. On one occasion Mal so anticipated the delayed challenge by Barten that he tied up while twenty yards in front. Another time at the Big Ten outdoor meet of 1948, Mal decided to run behind Barten. Barten's strategy apparently was to stay behind Whitfield, regardless of the speed of the

first 660. It worked wonderfully for the Ohio team. Clifford and Washington of Ohio finished first and second, with Barten 4th, and Whitfield fifth.

Since those first years he has gained confidence to the point that he can run a race almost any way he wishes and still win. Mal never forgets how he wins or loses a race. All that information is filed in some inner compartment where it becomes readily accessible as a race develops.

In the Olympic 800 m. final, Wint, the huge Jamaican, appeared to be the man to beat. Mal ran with the pack for 375 m. then sped from fourth place to a 15 yard lead in the next 50 m. With the other nine champions chasing him, Mal strode across the finish line 3 m. ahead of Wint, with Barten closing fast to get fourth place. The "maneuver", which means only that when you are going to pass anyone, or two, do it with authority, not hesitantly. Throw the "fear" into the other lads and then go for the finish line. Of course, it is nice to have a lot of ability at a time like that, but then only men of great ability win Olympic championships and get articles written about them.

Here are Mal's best marks:—

220 .....	21.2
440 .....	46.3
440 m .....	46.2
660 .....	1:18.4
880 .....	1:49.2
800 m .....	1:49.2

## Finnish Distance Methods

BY DAVE RANKIN

Purdue University

I consider it my good fortune to have spent six weeks in Finland with Armas Valste, Finnish National Coach, studying distance running under the approach of physiological and conditioning methods. Certain phases are not down in print, and an actual contact is necessary to learn the knowledge.

On my arrival in Helsinki, I started asking questions, and I think Mr. Valste was relieved when I announced my return to the States. My visit was between July 1 and September 1. I saw most of the competitive season and the Finnish Championships and also the European Championships in Belgium. It was also a great pleasure to talk with many of the fine coaches in Europe.

I was greatly impressed with the Finnish runners as the stop watch does not hide poor performances. During the latter part of the season, the hard pace carried throughout the race was amazing. In one race I saw the second, third, fourth, and fifth best times recorded for the year in 3000 meters. Every runner in the race helped carry a certain part of the pace with the aim of good time, and not playing around to see who could out kick who the last one hundred yards for the title. Every runner in every race is recorded a time which I sincerely believe helps a lot toward encouragement to run better even though it is not possible to always win.

Perhaps a great many coaches in this country, in an overall picture, do much the same amount of work per practice. The Finnish work-out is scheduled on speed and stamina. There is certainly no time wasted during the period of work-out. The athlete is constantly moving—if it be running or jogging. The workouts naturally produce fatigue in the body and the jogging between workouts has a tendency to disperse the fatigue products. The work-out is taken as a warm-up, work period, and cooling off period is a reverse of the warm-up period.

I think many athletes do not ready themselves properly to get the most out of the work period, and then cool off properly to put the body systems back to normal when the practice is finished.

An athlete is more or less measured for success by the amount of work his body can stand. A great many medical tests are administered to aid the coach in his decisions of work-outs.

The Finnish cross-country is used as a background of conditioning and usually lasts several months. I believe the best way to explain it is working hard to be able to take harder work. When the preliminary training is done the work-out distance is lowered to 330 yards and 660 yards. On different days running of thirty to forty minutes is often substituted. The 330's and 660's are repeated with recovery periods between. As the condition progresses the recovery periods become shorter, the pace is faster, and the distances repeated more times. Naturally, the shorter distance men will have greater speed with less repeated distances. The reverse will be true for the longer distance men.

As I write this article, I realize it is not possible to explain in detail many necessary reasons for the work-outs. I assure you every step is done with a definite reason. Perhaps the article is not detailed enough to set your mind to wondering as mine did, and further explore the many unknown factors involved in our sport. In athletics, we, as coaches, have only the body and mind to work with and the more we learn about both, the better qualified we are to prescribe suitable work-outs to achieve definite goals.

This writing is not the work of a master—only words from one trying to learn more about one of the world's most interesting sports.

[illegible]



